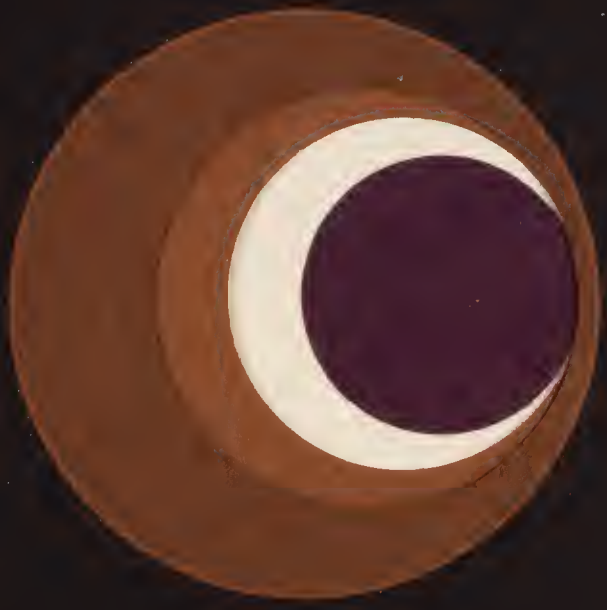
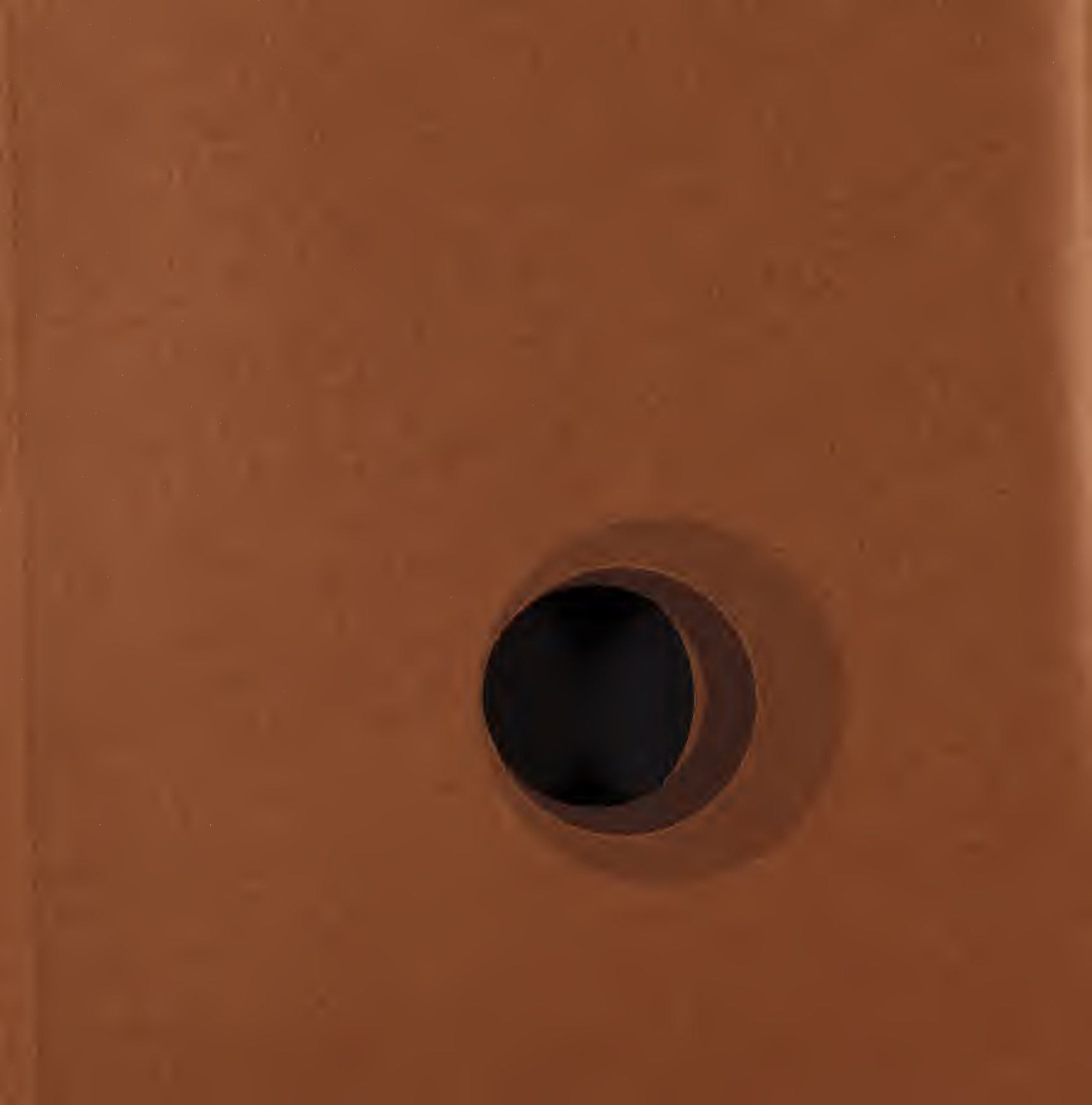
SCHOOL OF ARCHITECTURE, UNIVERSITY OF MANITOBA






perspe


ctive EG

EDITOR'S NOTES

The last issue in 1963 of 'Perspective' was printed to celebrate the Fiftieth Anniversary of the Faculty of Architecture at the University of Manitoba. In 1964 a minor publication was produced under the theme of 'Man and his Environment.' However, for the past two years the actual 'Perspective' has not been in production.

The intent of the 1966 edition is to re-establish the tradition of 'Perspective' as being an annual publication which constitutes a basic component within the framework of student activity relating to the Faculty and the University.

The absence of 'Perspective' for the interim period places an increased stress on the present issue in terms of offering a thorough coverage of student projects. In view of this condition it is hoped that the 1966 issue of 'Perspective,' will have succeeded in presenting complete cross sectional representation of the student projects for the past two years.

In addition, the 1963 Anniversary Issue established an unprecedented standard of production and it is the ulterior concern of this present edition to achieve and maintain this standard of excellence.

Interest and stimulation are two concerns for a successful student publication and the effects of these two factors are reflected in the enthusiastic functioning of student life within the Faculty and the University. 'Perspective 1966' has endeavored to satisfy these two vital considerations while fulfilling the purpose of providing a communication media for those beyond the realm of the Faculty and the University, who are interested and related to the progress and development of the Faculty of Architecture at the University of Manitoba.

Howard Clark

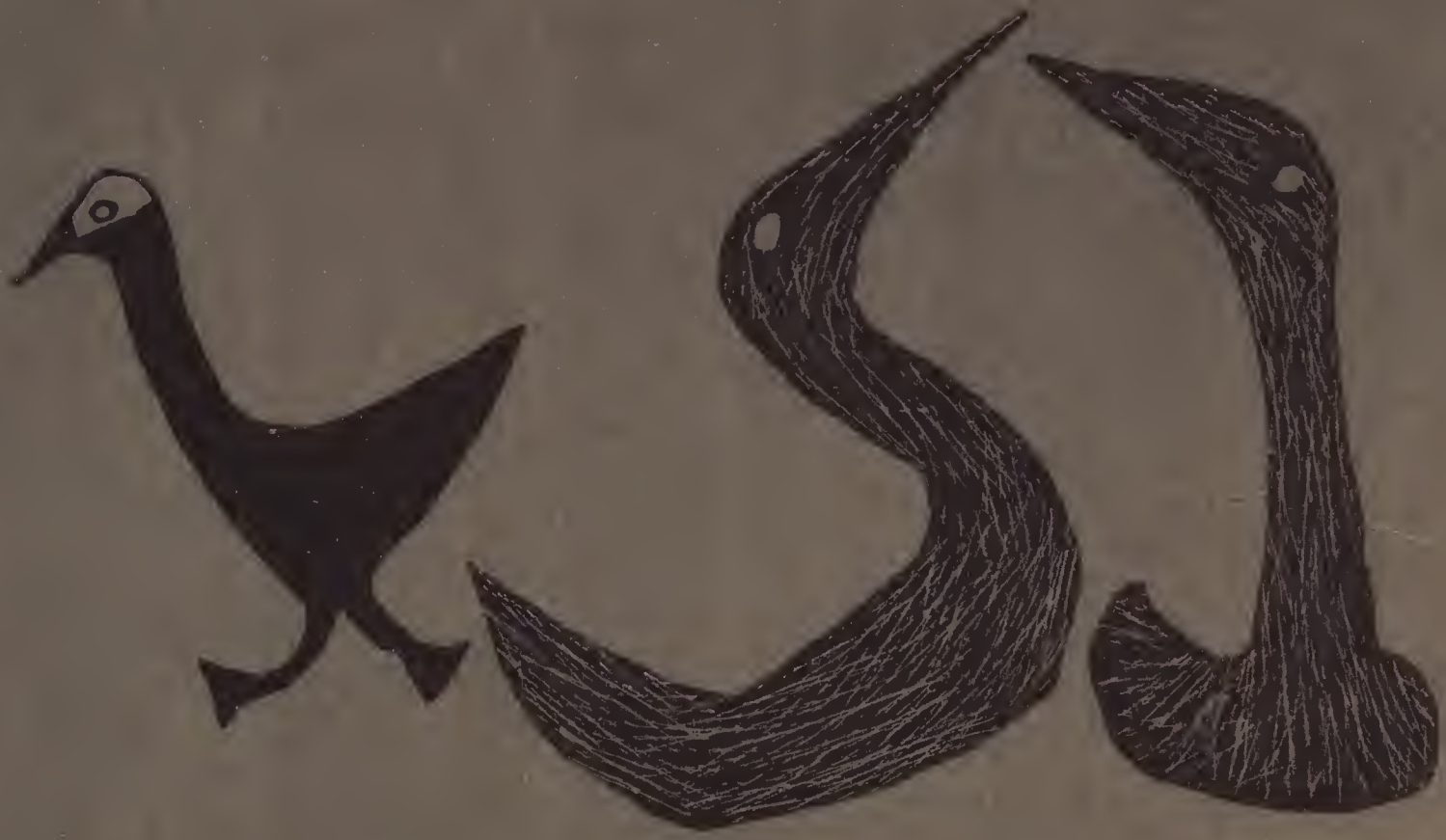
"PERSPECTIVE" is published annually by the Students' Architectural Society, University of Manitoba.

ACKNOWLEDGEMENTS
The late Dean John A. Russell
Henry Kalen and Manfred Linneman
E. George Kneider.

JOHN A. RUSSELL MEMORIAL ISSUE

TABLE OF CONTENTS

AKU 65



TECHNOPOLIS

a realization of the computerized city

a utilization of the advanced technology

a technical city in a space structure

To avoid both permafrost problems and the problem of circulation in the dense northern city, we have developed a walking city in which pedestrian movement becomes the main means of circulation. "Gevs" —Ground Effect Vehicles move both people and goods freely, in the under city, over the ground and on the water.

The city is highly compact. By interpreting Howard's Garden City Concept and applying it to this situation in a mechanical society new relationships arise between work, transportation, living, education, recreation, and culture. Thus rapid transportation is separated by moving beneath the site. Social activities are closely related horizontally and light industry is related vertically to these.

This solution is based on an analysis of the present technology; it is a realistic view of the new computerized society—it is no more extreme than the view of the industrialized society of Walter Gropius or Le Corbusier on the early 1900's—or the incomplete idea of the Italian Futurists and their concept of the machine.


AKU
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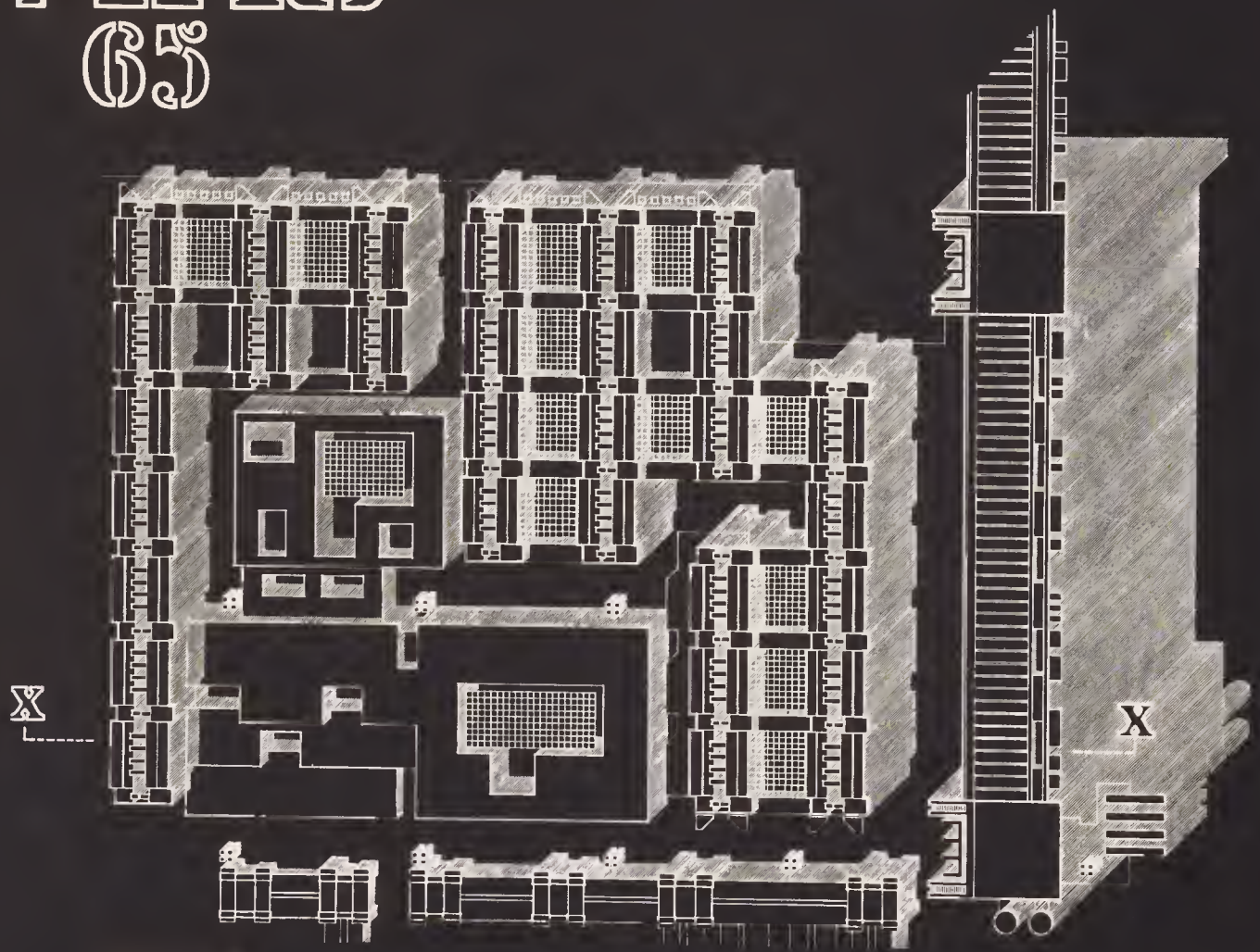
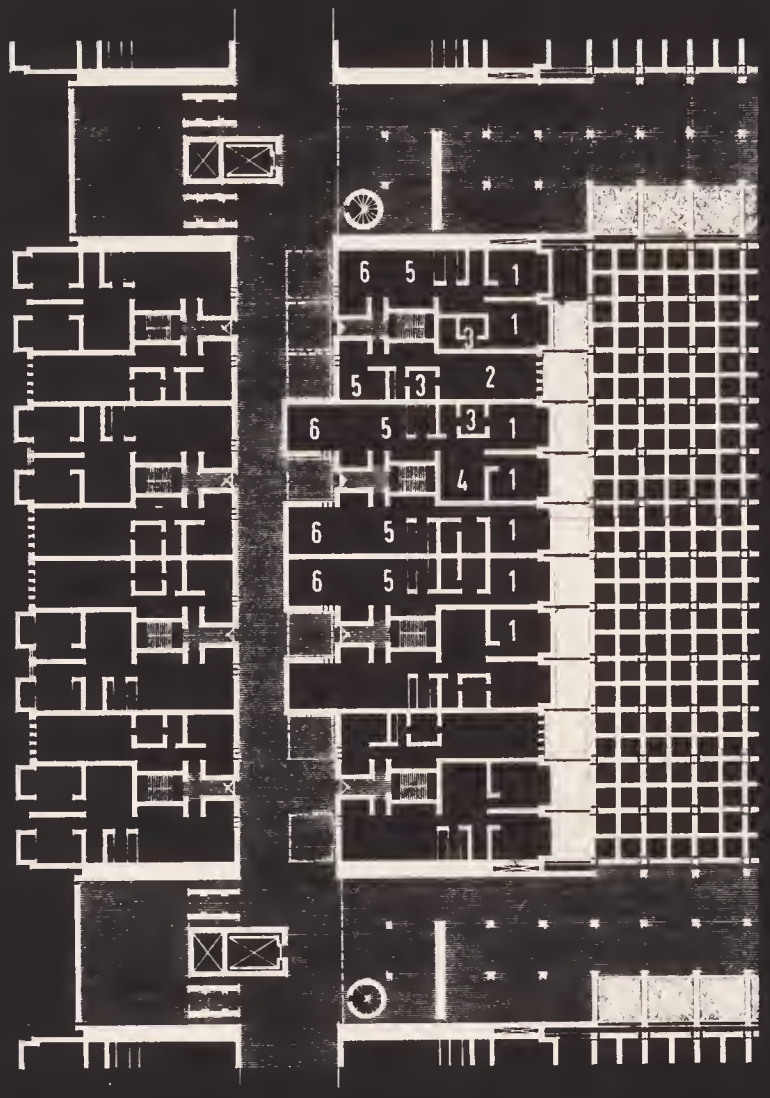
AKU 65

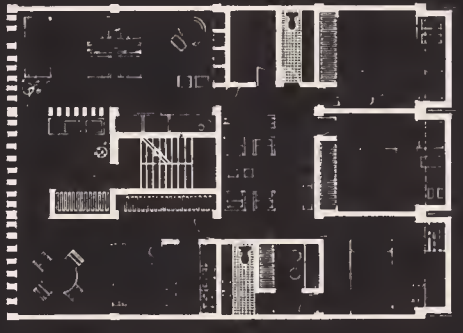
INTENT: To provide housing for middle income living in an age when the forecast technical advantages of today are a reality.



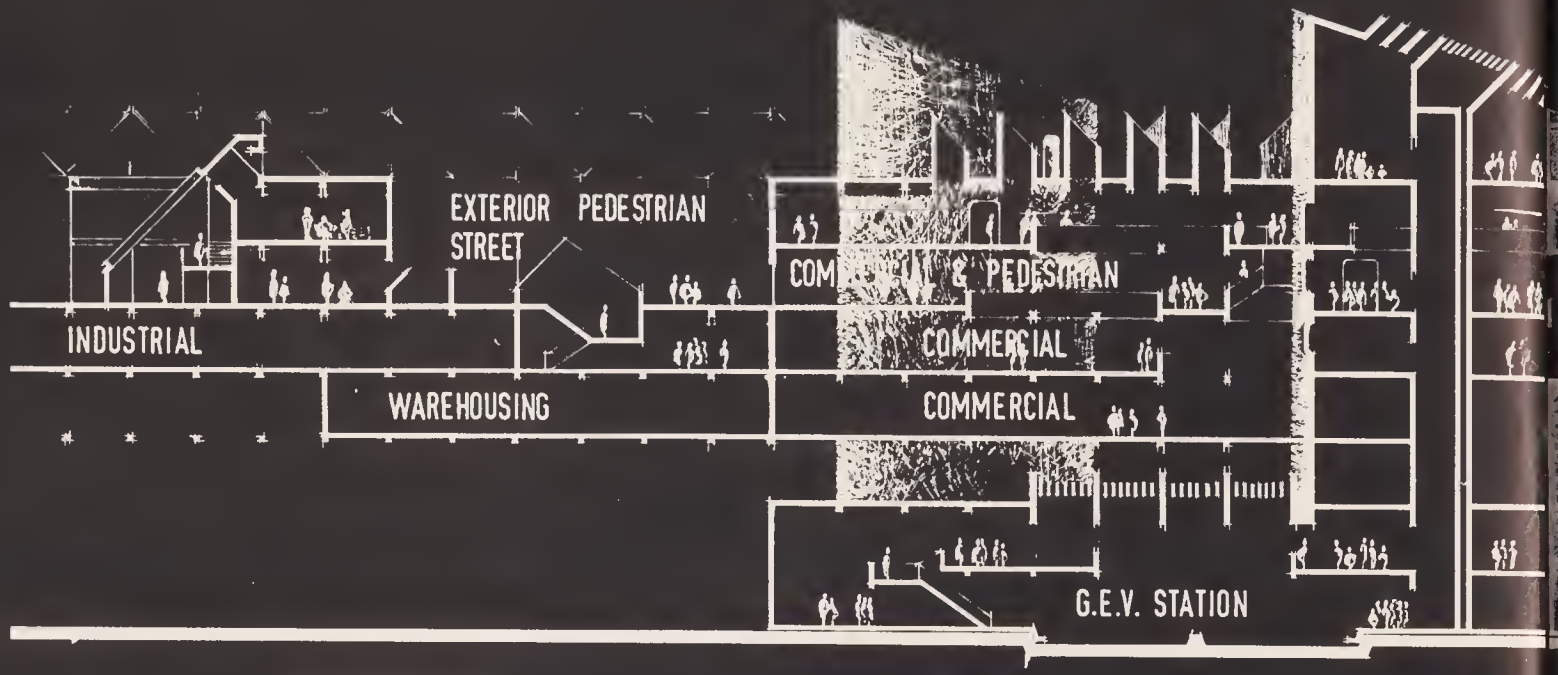
SITE



1 Bedroom
2 Bed Living
3 Dressing
4 Family
5 Dining
6 Living



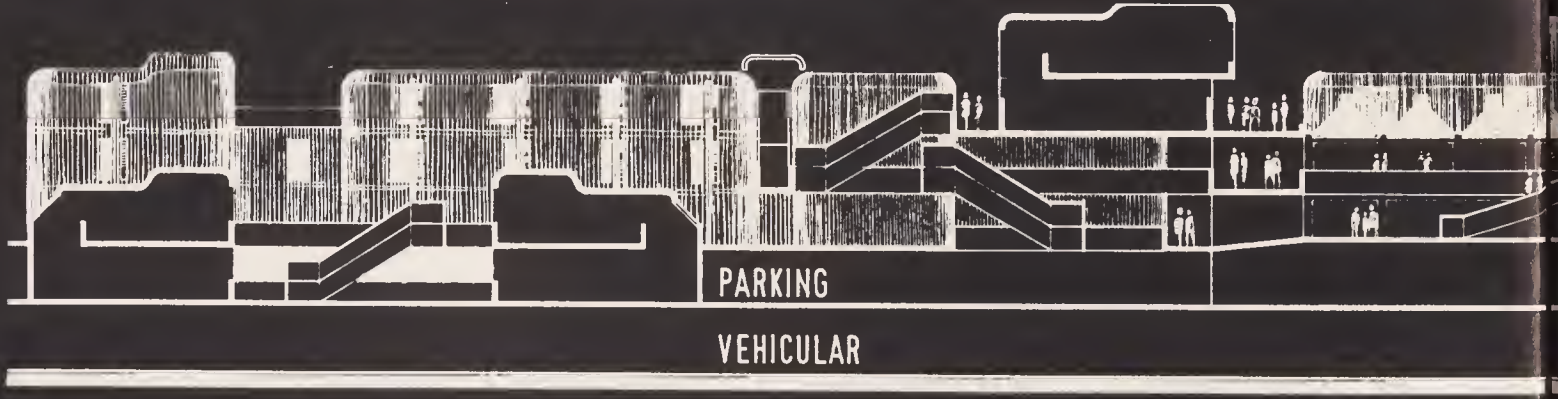
FLOOR 5



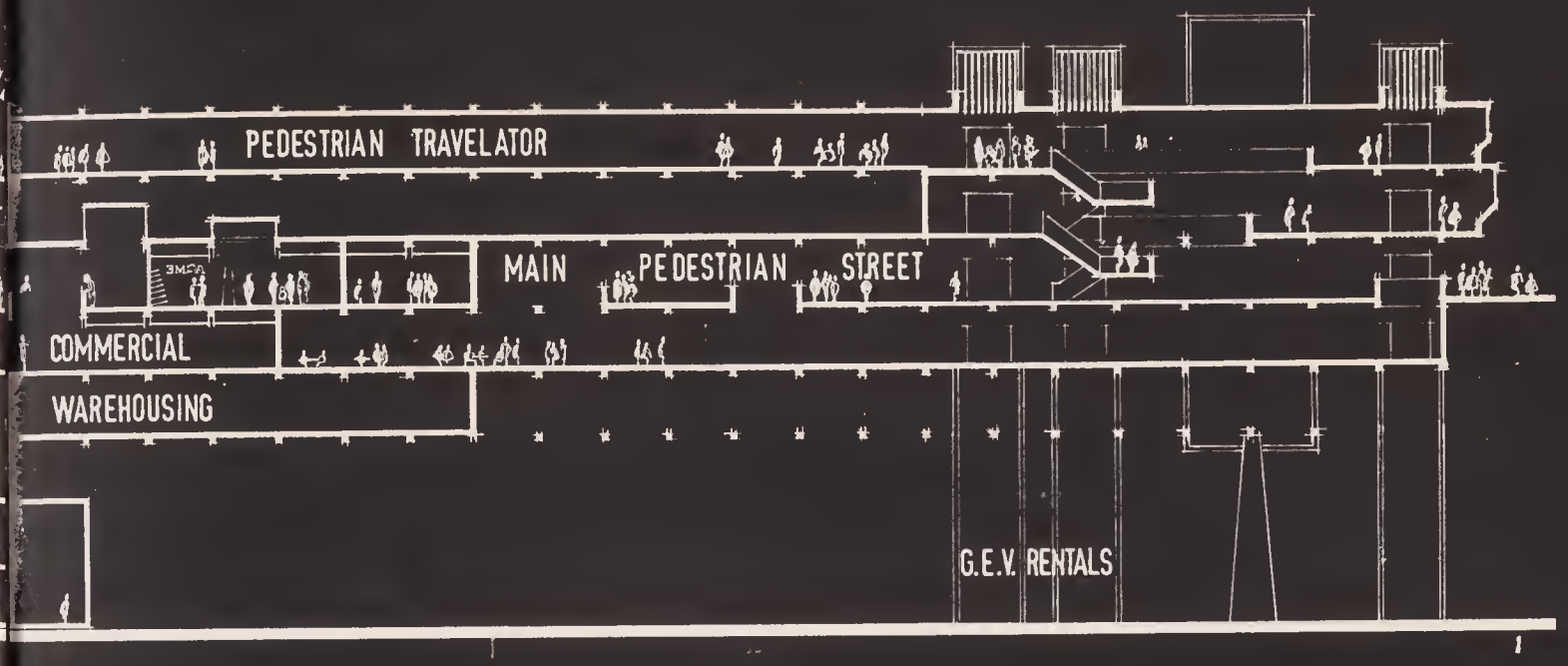
TECHNOPOLIS:

This section incorporates a theme on hierarchial usage in a compact city. The lower open space over which the city floats is used for 'hover craft'. Access to the city is through a lift system in the stilts of the city.

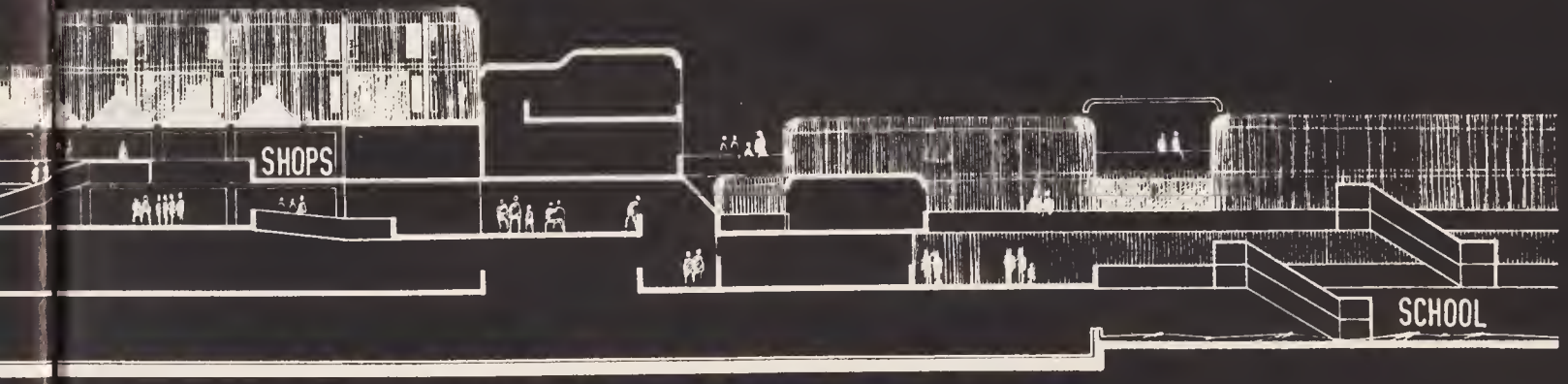
Service and industrial units are utilized through the lower levels with urban amenities services and housing on the upper levels. The city is a building with all the aspects for change and expansion and active life built



Y - Y

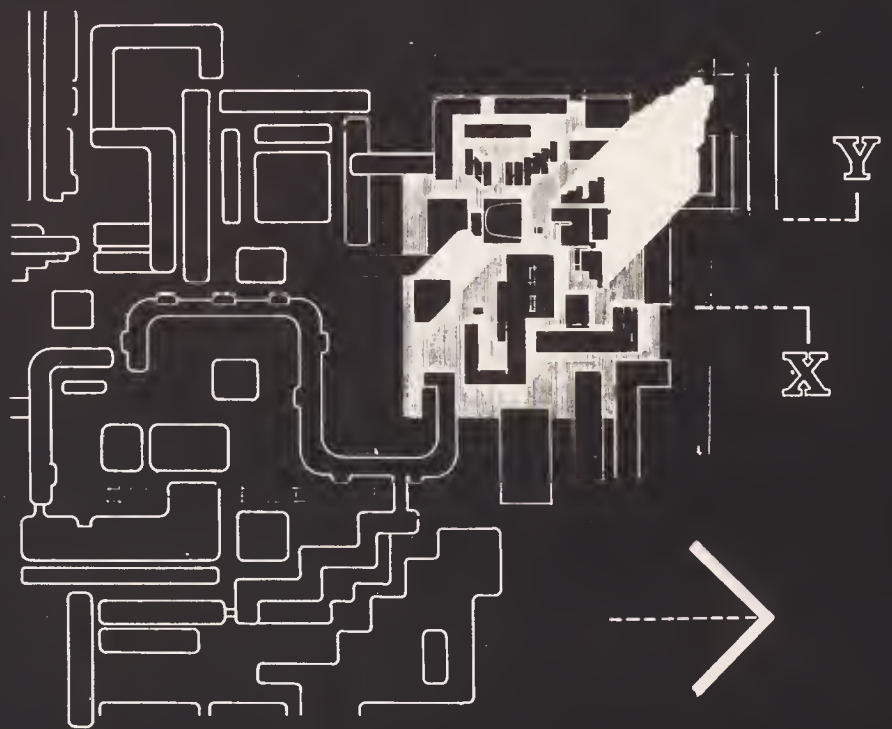


into the man made land form.
Demands of the northern climate require protected service and pedestrian ways, and an integration and compactness of living units, for efficiency and protection from the wind and elements. The tight linkage of all the units is an expression of the congeniality (for protection) which is one of the sociological phenomenon of communities in severe climates.



AKU 65

A tower in a Northern City must exist because of the basic need here of people to live closely in tight and active spaces. A Tower in a Northern City requires an expression.
The north west wind and the need for sun necessitate a plan that opens to the east and south.
An interlocking plan of major units allows two exposures and through ventilation.
The central circulation space and core avoids corridors and allows a penetration of light.
A transition between the low rise and high rise is developed.



SITE

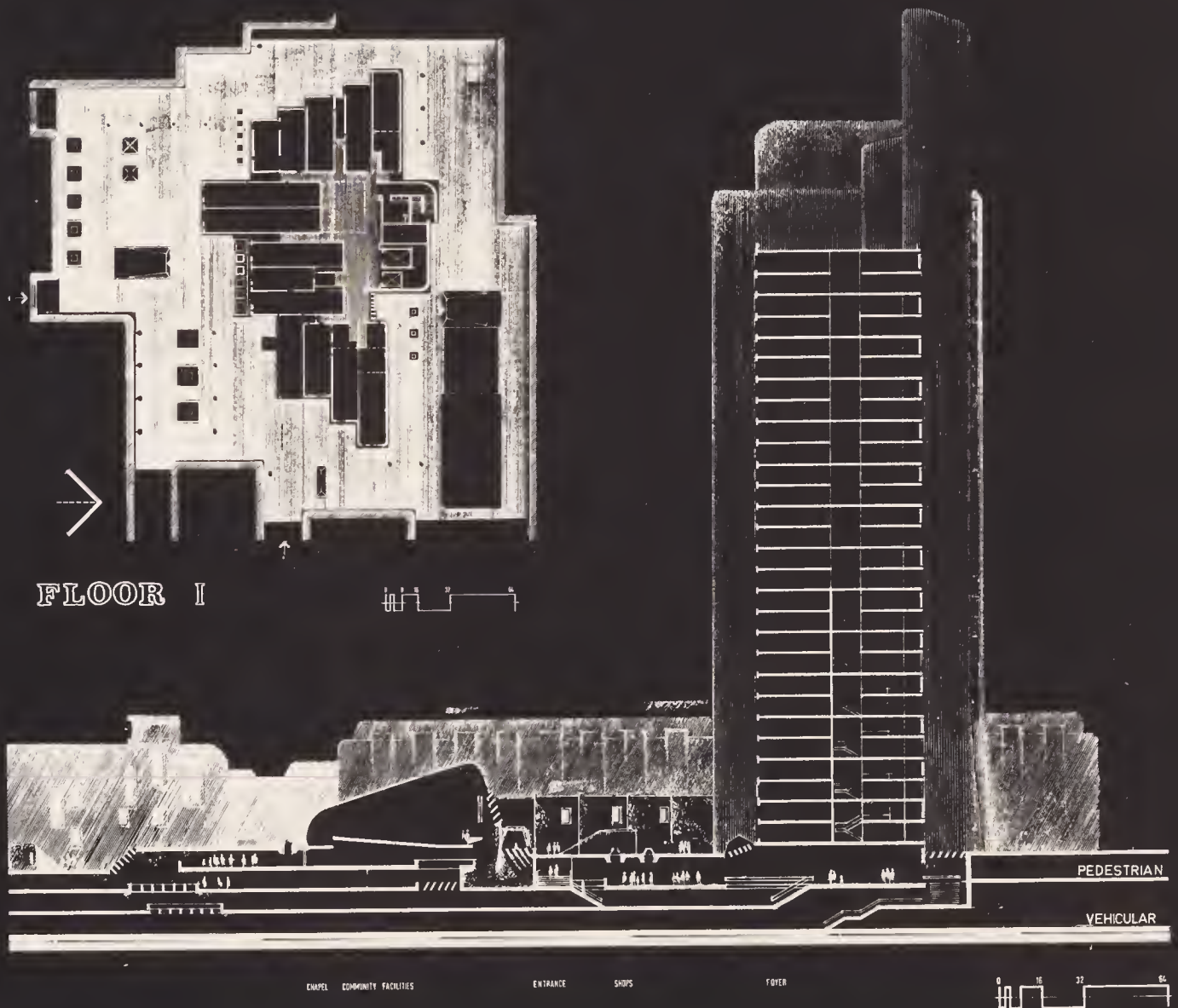
Climate: cold snow and wind demand for the white man a close knit series of protected spaces. A community of high density, of tight and active spaces.

A tower, if it is required within the framework of overall northern community development will acquire a specific character . . . the north west wind and a desire for the low hung sun are obvious determinants. This study develops a south east exposure with a two level system of interlocking units that gives a multi-directional and expansive aspect to the units. They also provide easy cross ventilation.

The minimum use allowed exterior spaces demands a greater use of interior 'public spaces'. Each floor of the tower develops a two level square. Well lit and spacious to be developed as a common ground particularly for small children and house wives attraction being the workings of the elevator and laundry facilities etc. . . .

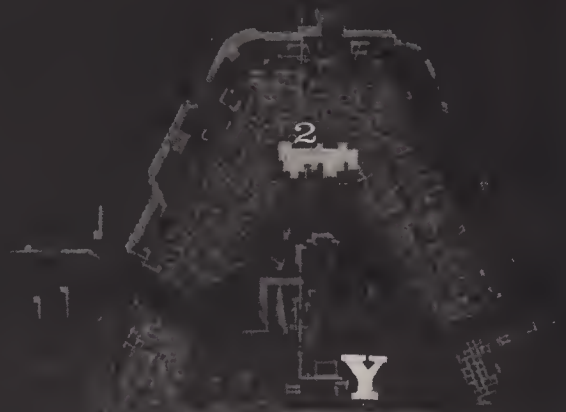
The exterior aspects of the study develop a relatively solid wall to the north and the north west . . . with large glass areas opening to the south and the south east. Balconies are illogical in this instance. The shadow of the tower is designed such that it will not fall on or interfere with the residential areas. The connection of the tower to the community is blunt. The tower is a vertical residential street. The street's drug store, grocery store, beauty parlor and barber shop are at the corner meeting with other internal streets. The beginners of the community concept are seen in the study.

The essential purpose behind the study was to examine the form a tower in the north might have to take and considering the difficulty and confining aspects of the climate a study into the possibilities of increased variety and activity in the internal public spaces and private internal spaces, that are the dominant element of the physical and social environment of the northern community.

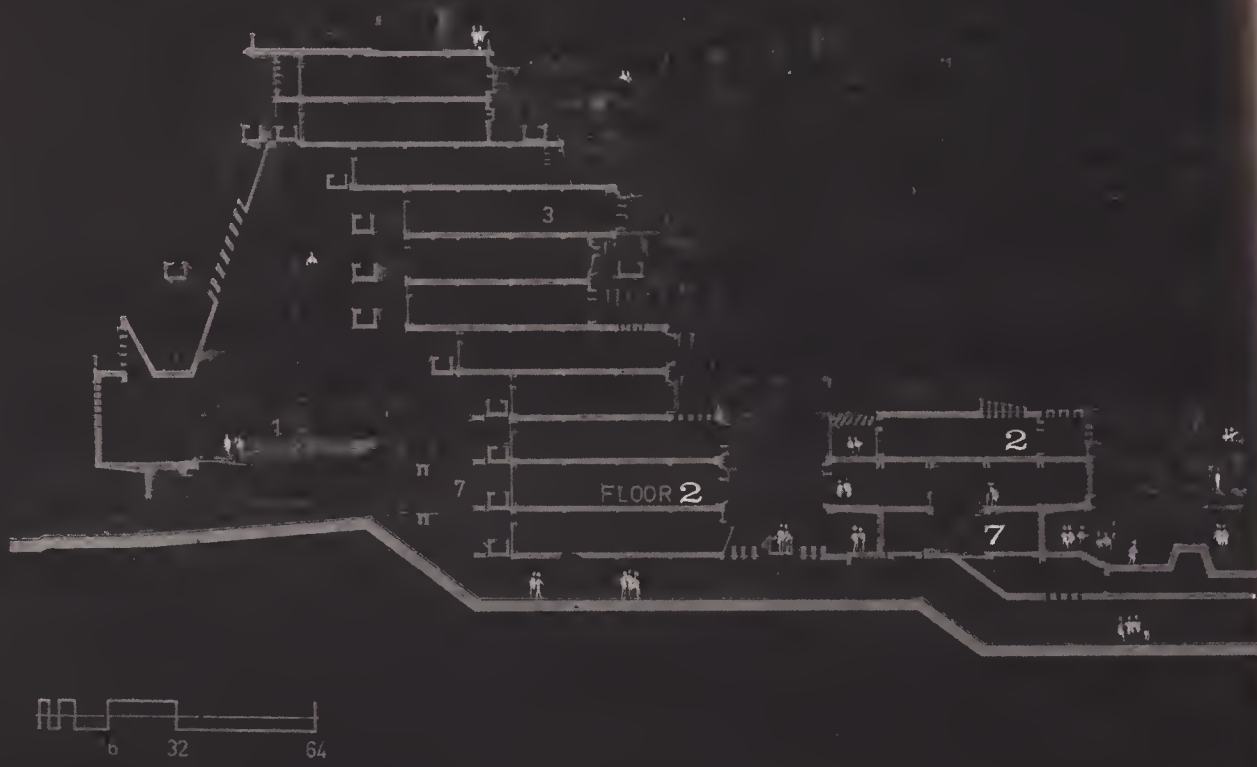

FLOOR I
PEDESTRIAN
VEHICULAR
CHAPEL
COMMUNITY FACILITIES
ENTRANCE
SHOPS
FOYER

AKU 65

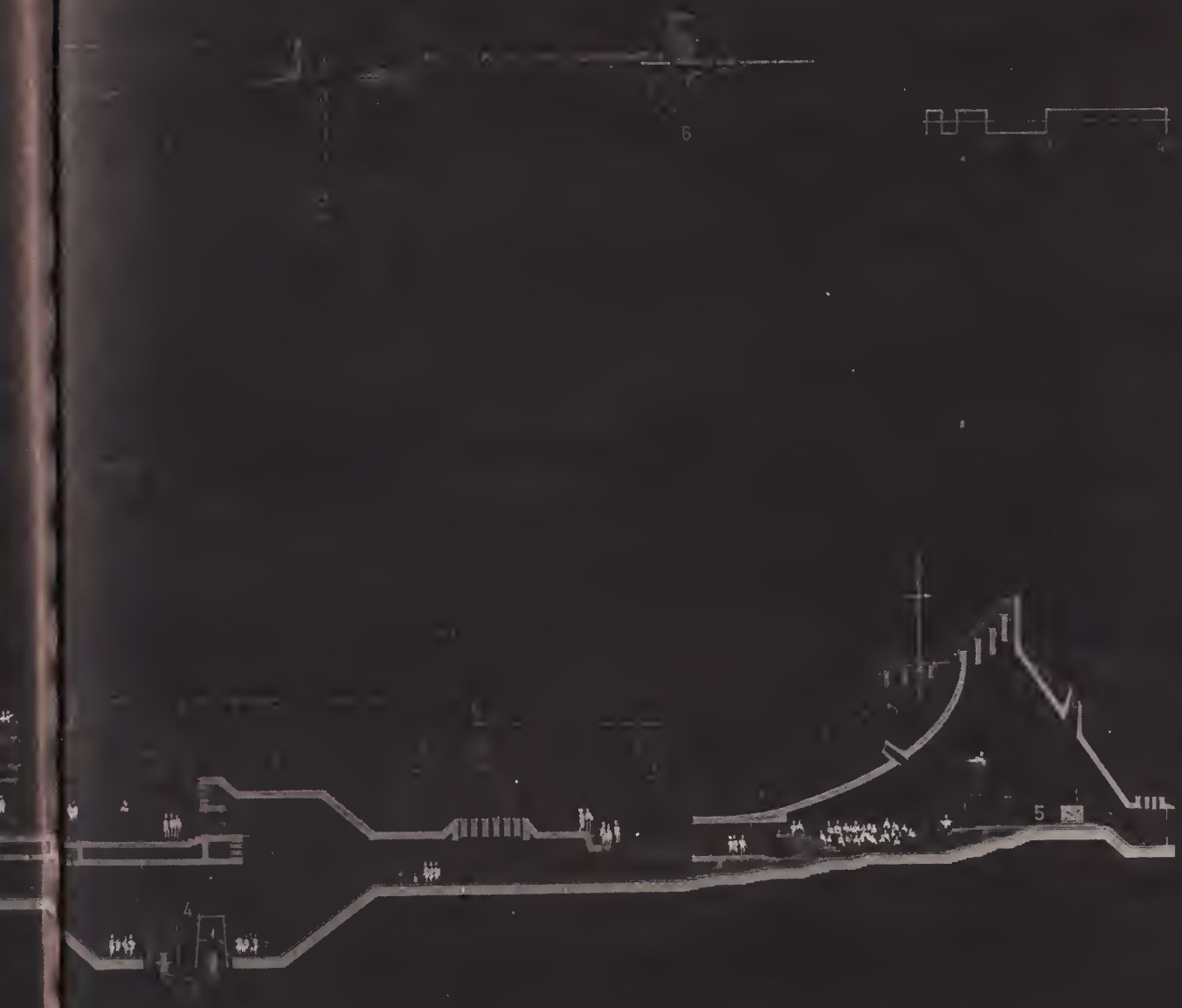
FONTAINEBLEAU SCHOLARSHIP



1. Commercial Interior
2. Low Rise Housing
3. High Rise Housing
4. Monorail Stop
5. Secular
7. Interior Communal Space



To achieve a distinct architectural idiom in harmony with the subarctic environment. Therein to integrate residential, commercial, social and institutional facilities into compact, distinctive and easily recognizable communities. To create a controlled climatic condition inducive to optimum social interactivity during long and severe winters.



AKU 65

MUROPOLIS

to provide a wall for protection from the wind

to provide an efficient transportation system

to provide a microclimate

The design intent of this group was to provide a wall which acts as a barrier between the populus and the inclement orientation. The wall is the spine and nerve centre of the city, wherein occur all the important civic functions.

Due to the severity of the winter winds it was thought reasonable to orient the city to the south on the lee side of the mountain ridge, in a sense turning one's face to the sun while keeping one's back to the wind.

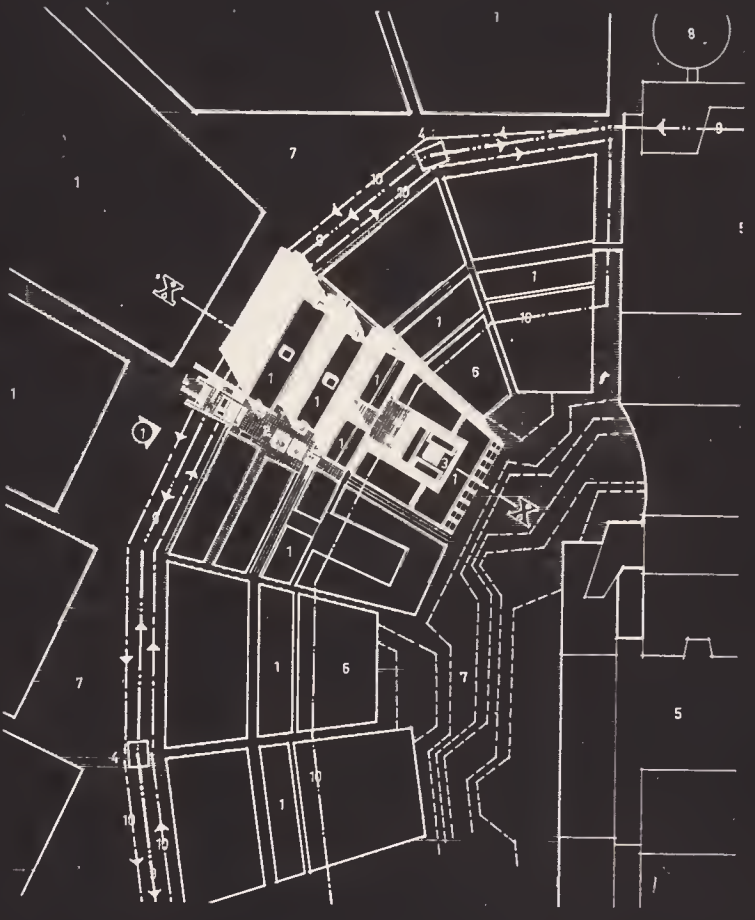
To the north of the wall, bordering on the Churchill River Mouth basin, is the heavy industry that employs many of the cities inhabitants. The major industries are steel smelting, oil refining, and transhipment facilities.

The critical site location of this development within the city was the deciding factor in the formation of a general concept. It was felt that a strong building mass was needed to check any over expansion and to provide an "elbow" for the expanding city along the ridge. The relationship to the recreational centre, monorail and the continuation of the wall required a segmented development. This would allow ease of pedestrian movement to these amenities.

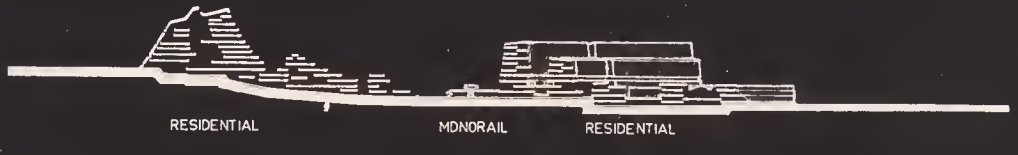
The social structure of the development is designed. This is further broken down into dwellings for transient and permanent workers. The former are closely related to both private and public transit with an environment geared to active social intercourse. The development terraces down to the established workers' dwellings where transportation is primarily by private car and the environment emphasizes the family unit.

Conclusion.

Throughout the spaces designed in Regina College, a consistent mood, a consistent character has been created so that each of the spaces are like variations on a theme rather than separate.



1. Residential
2. Commercial
3. Community Facilities
4. Transit Stop
5. Recreation
6. Primary School Location
7. Park
8. Parking
9. Monorail
10. Vehicular Traffic



AKU 65

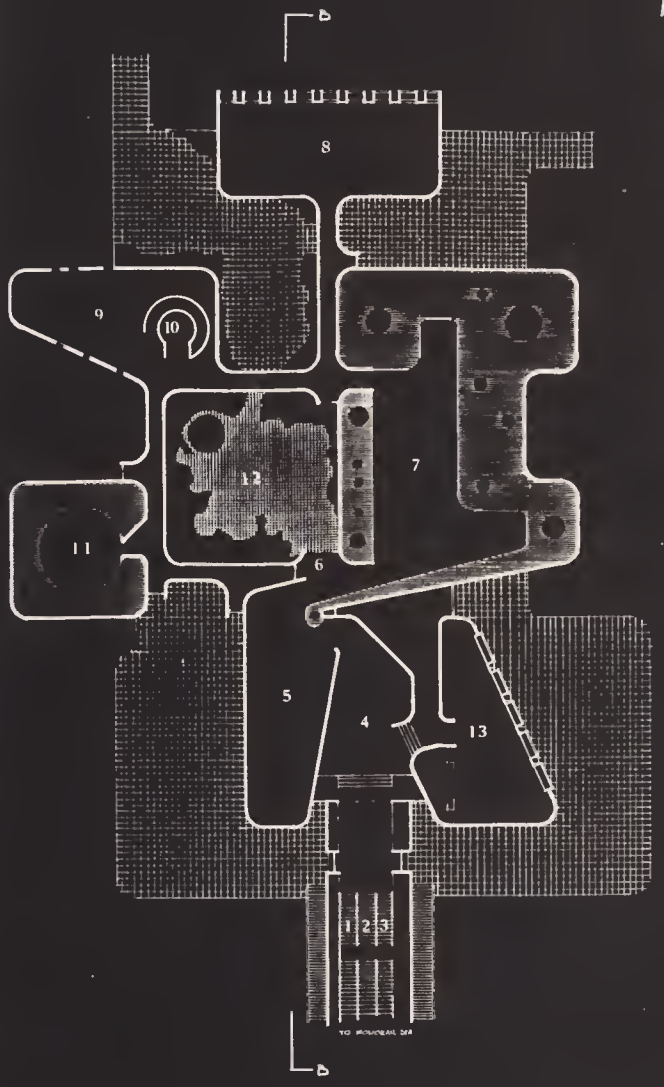
INTENT:

To retain and develop the inherent abilities of the indigenous people in an environment adapted to his desires & needs while introducing possible means of integration with the industrial society by providing direction toward change in housing and community experience.

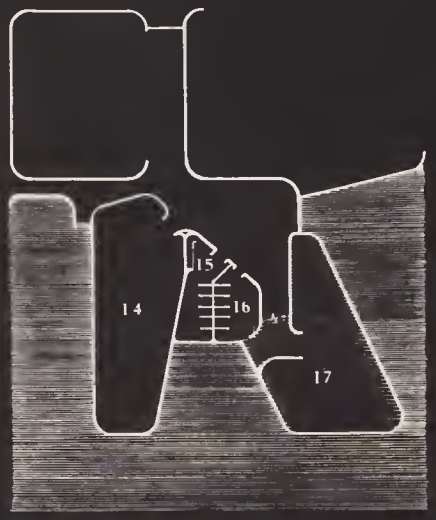
1. Court Play and Work Area
2. Entrance
3. Cleaning Area
4. Kitchen
5. Dining Living
6. Workshop Study
7. Bedroom
8. 2 Way Fireplace
9. Meat Storage
10. Shed and Garburator
11. Fish Storage
12. Exterior Fire

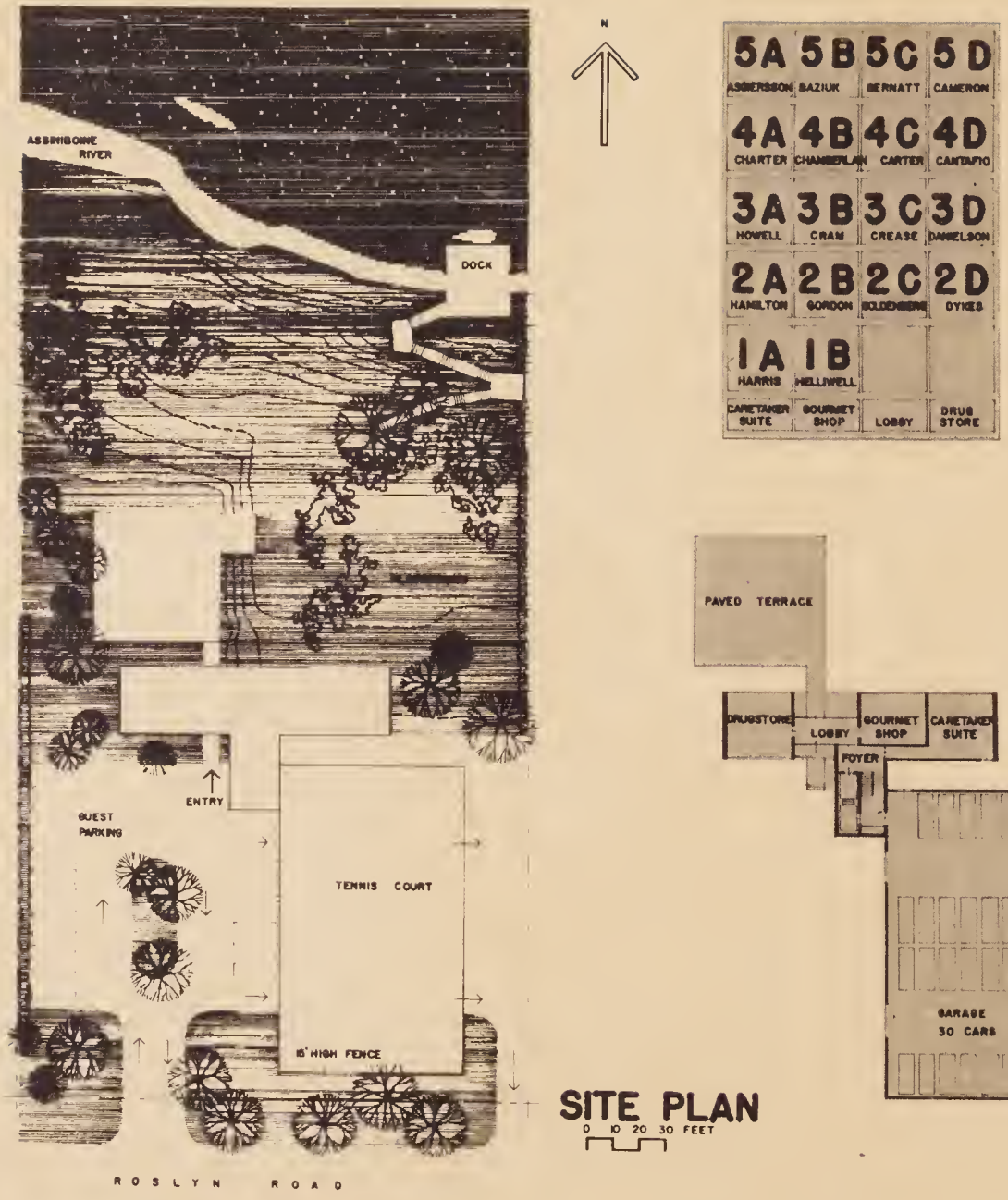
AKU 65

ARCHITECTURE, ECOLOGY AND FORM
MUSEUM AND CONTEMPLATION PLACE
in the arctic region. AKU '65



1. Escalator
2. Stair
3. Escalator
4. Lobby
5. Earth Exhibit
6. Balcony
7. Universe Exhibit
8. Library
9. Observatory
10. Elevator to Tower
11. Contemplation Place
12. Indoor Garden
13. Cafeteria
14. Mechanical Room
15. Women
16. Men
17. Crawl Space





CONDOMINIUM HOUSING

Problem: To design a complete living environment for a family in Manitoba. The client's way of life requires living facilities both in the city and in the country.

Client: A Winnipeg barrister 39 years old. His family consists of a wife who is thirty-five, two sons who are twelve and ten years old and a daughter who is seven years old.

Financial Limitations: The client has thirty thousand dollars available and is willing to take out a mortgage worth ten thousand. The condominium will cost him fifteen thousand to purchase and he is willing to spend another ten thousand for the interior partitions, floor slabs finishes and equipment. He spends two thousand for property at Selkirk and is willing to spend an additional eleven thousand on building. Architectural and design fees will be approximately two thousand dollars.

Site and building details: The condominium consists of twenty units. Each unit is twenty-five feet by twenty-five feet in area and the height is twenty-five feet, completely serviced by elevators, covered parking, janitorial services and landscaping. It is located overlooking the river on Roslyn Road.

Problem Analysis: Certain assumptions are made concerning the client. As a rising young lawyer it is expected that he and his wife will be active in community affairs. They very likely will serve on cultural committees (Winnipeg Symphony, Royal Winnipeg Ballet, Manitoba Theatre Centre, etc.). It is expected that they will do a considerable amount of formal entertaining. Because of the nature of his work and their family social responsibilities it is necessary for them to spend from Monday to Friday in their Town House. They hope to spend the week ends in their Selkirk House. During the summer it is possible for the wife and children to live in the Selkirk house with the husband commuting and spending holidays and week ends there.

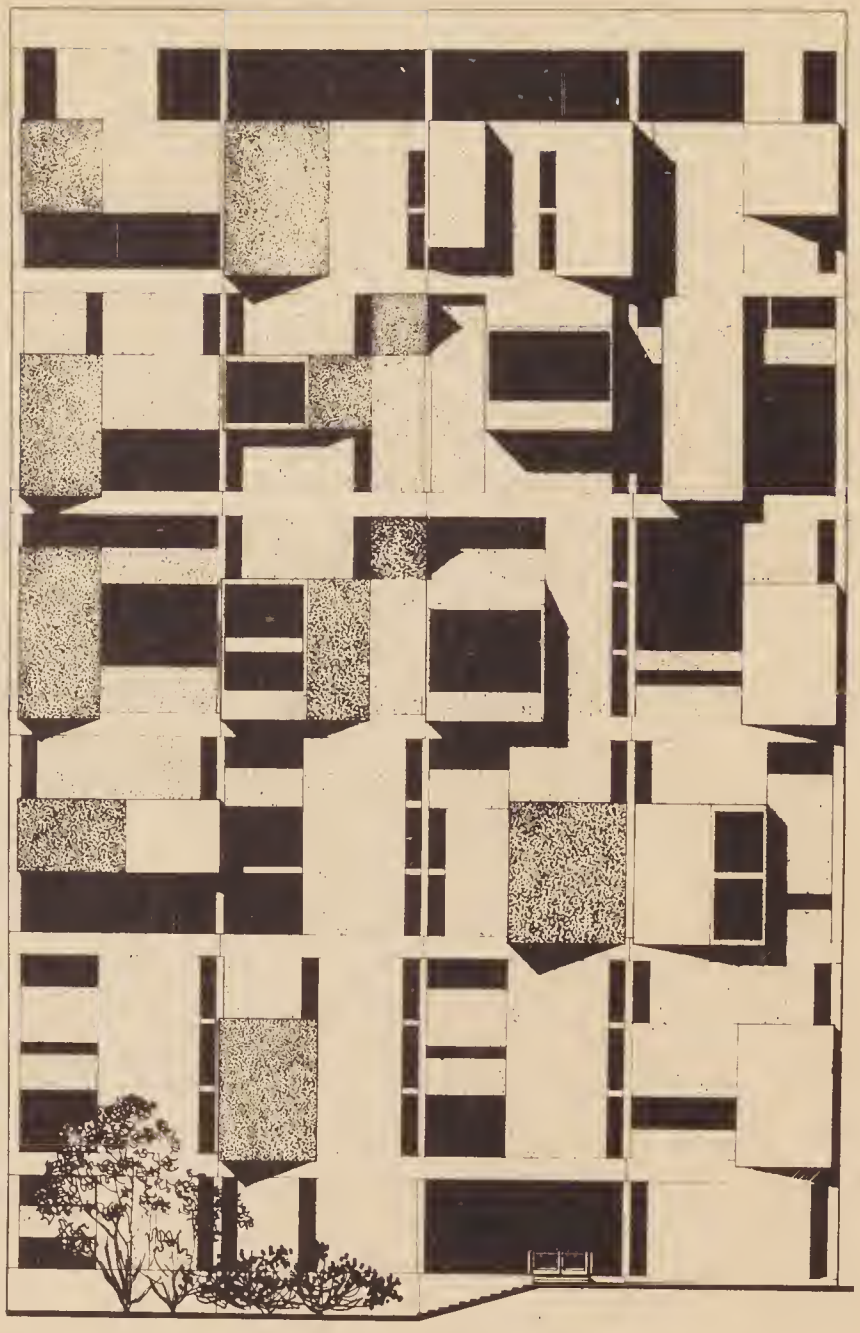
Site Analysis: The most dramatic view is towards the city sky line to the north. Since it is assumed that the condominium would be adequately insulated and air conditioned the weather is not a great factor in the design of each unit. The importance of the view will vary with the assigned floor of each unit since they will obviously vary in their elevation from the ground.

Aesthetic Analysis: Because of the nature of the activities of the lawyer and his family it can be assumed that the main areas of the activity within the unit will be of a formal nature in concept.

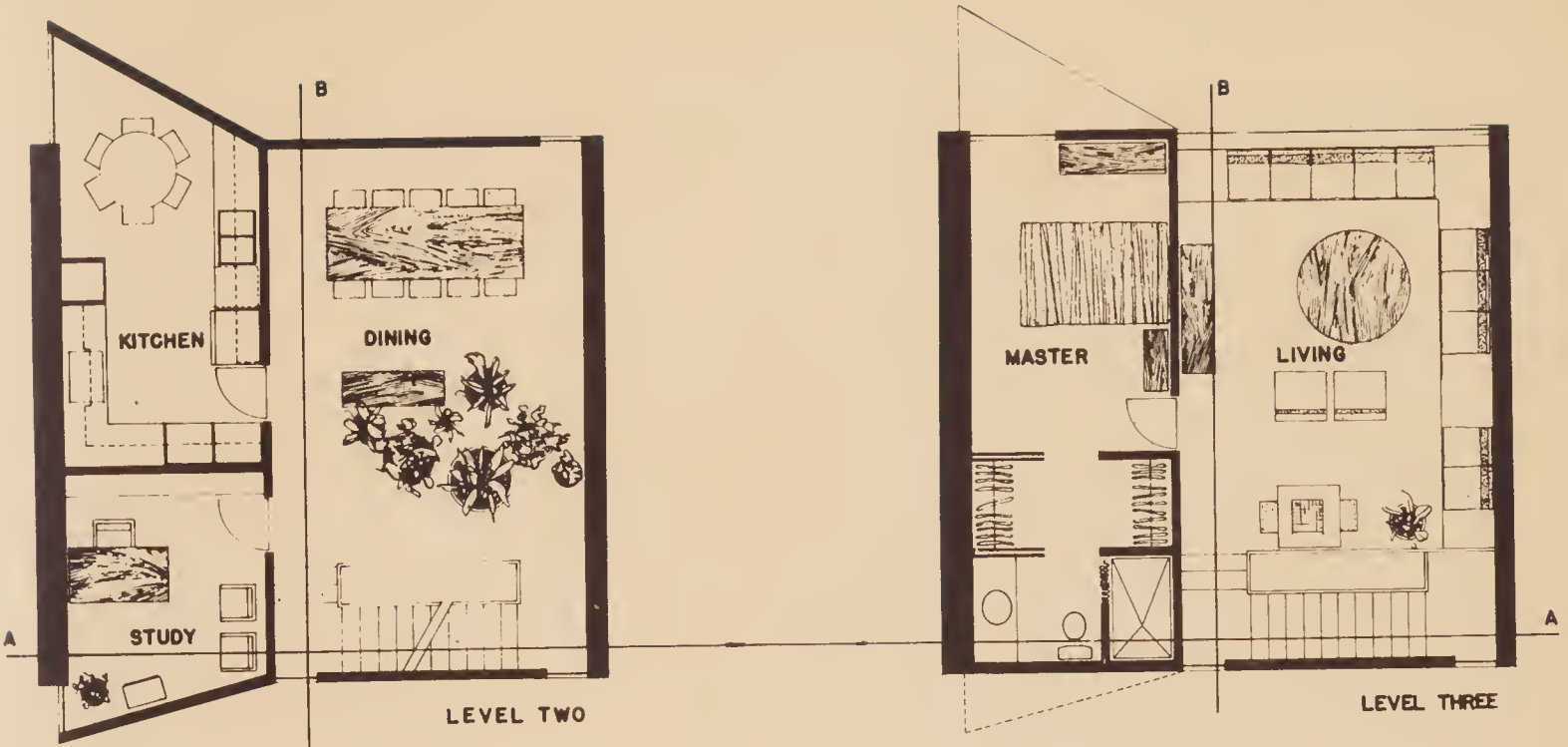
Concept: To state the basic concept negatively, the town house is not a single family detached house, nor does it by itself represent a total living environment. It is one unit among twenty and it expresses the more formal activities of the family living in the city. The more informal activities are expressed in the Selkirk home. For this reason the design of the Town House must be related to their other units, in the condominium and to the Selkirk home.

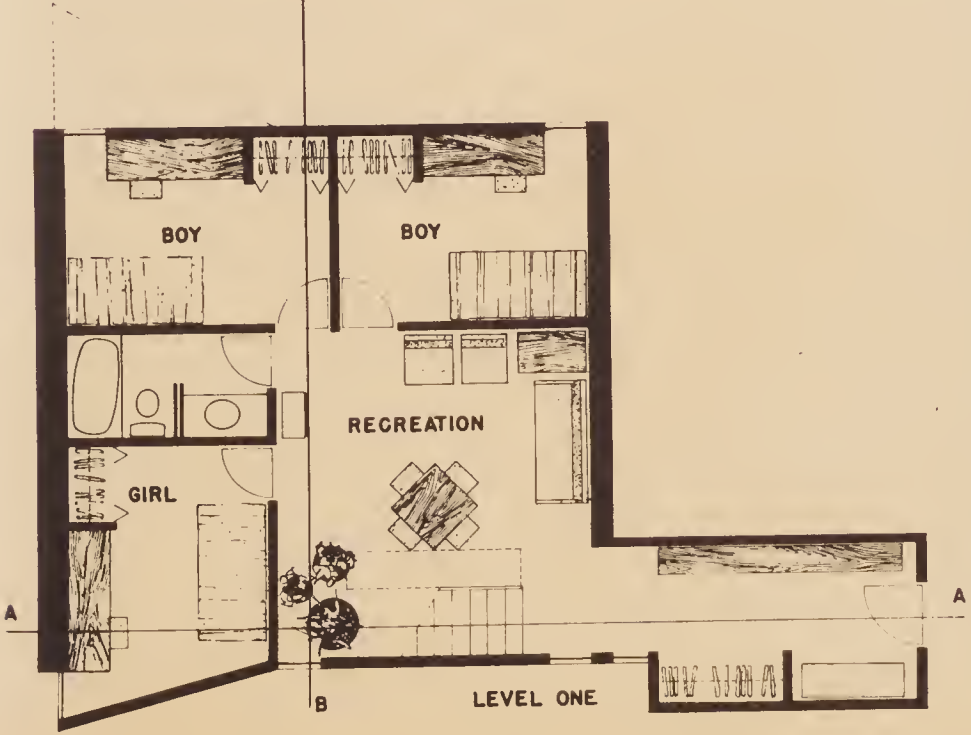
Façade concept: It was decided that the façade must possess three qualities . . . it must be made of a material sufficiently inexpensive to enable changes to be made should the condominium unit be sold. The façade of each family must be polite to the neighbouring units, and to the façade as a whole. It must suggest a human scale. For these reasons it was decided to use stucco for the façade. The windows are designed as slots and bays in such a way as not to interfere with the neighbours view and they are set in such a way as to suggest room sizes served.

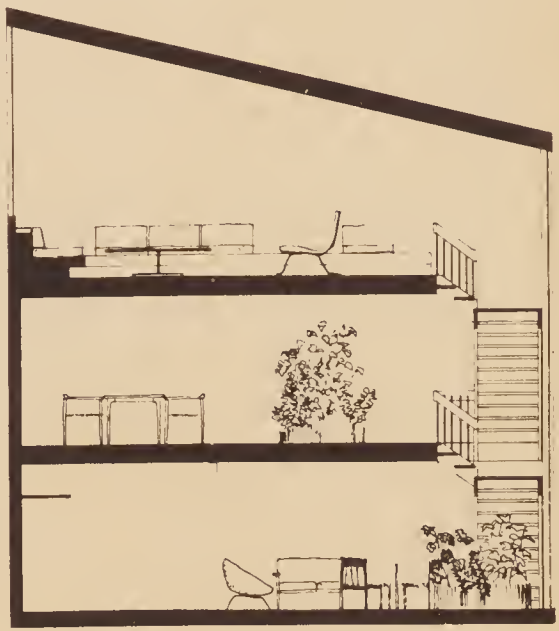
Collaborative approach: Since the design of the condominium units must be related to the entire condominium it was decided to approach the problem as a group project. The procedure followed a divisional staging process. Each group was split into teams to prepare the basic research on function aesthetics and structure. On the results of this research certain decisions were made concerning the overall structure. Using the research as a guide each individual member of the group prepared his own solution in the way of plans and sections. A group decision made involving façades and individual plans were adjusted to the disciplines of these façades. The group was divided into presentation teams to do inking, perspectives, models elevations, rendering, photography and lettering. The result is the collaborative solution that is here presented in one group's aspect.

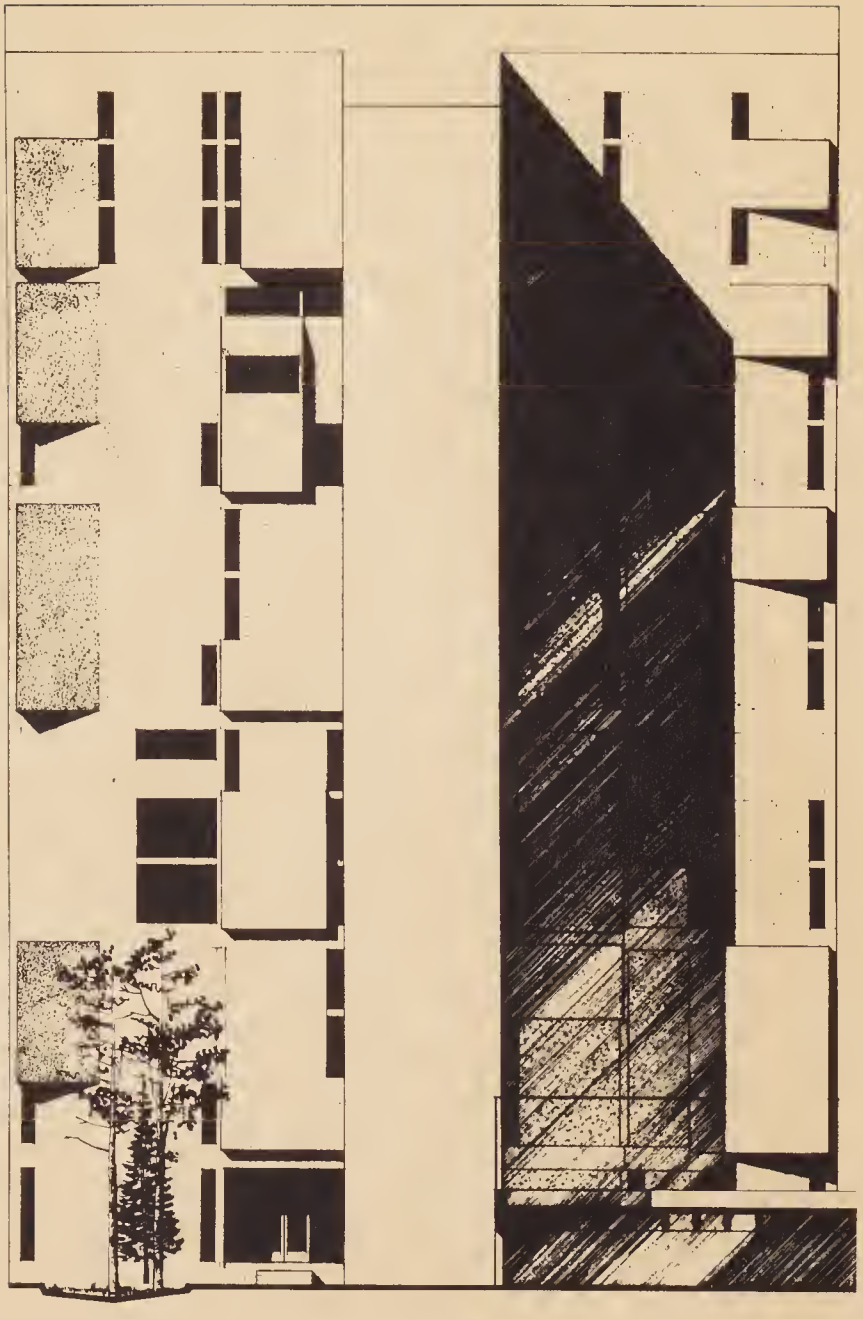


NORTH FACADE


B
KITCHEN
DINING
STUDY
A
LEVEL TWO
B
MASTER
LIVING
A
LEVEL THREE


BOY
BOY
RECREATION
GIRL
A
A
B
LEVEL ONE


SECTION BB



SOUTH FACADE

PORTAGE LA PRAIRIE

"The decay of American Cities is one of the most pressing problems of the nation. Every year we hear of a continuing flight from the central city: of sprawling supercities; of automobiles crawling through and around the city roads that lead to ultimate strangulation; of a city based culture that is allegedly destroying the spiritual life; of lonely crowds of organizations of men. But despite all this complaining about the cities defects and deficiencies, it is now fashionable for many American intellectuals to express their tender concern for the city's future; to hope for its decay arrestation, and to offer plans for its revitalization. No week passes by without some of the New University Conferences on the future of the city being held, without some new effort on the part of educated men to deal sympathetically with the latest concerns of urbanization." The previous statement is the opening introduction from the book 'The Intellectual Versus the City', by Morton and Lucial White.

Our status of educated men could be questioned but the concern for cities and their inherent problems is adequately apparent. The people of Portage la Prairie will perhaps consider the obvious points which will be projected by this study. The actual study was conducted for two very strong reasons. It was intended to answer the educative needs of the fifth year class. As an educational process the study was directed towards developing the ability of the students to understand objectively the significant factors of an existing city; to logically extrapolate with assumptions for the future the possible directions for the future growth; and to experience the problems and scope of organizing and giving form to the possible character of the city. This process is clarified by the constant effort to consider objective factors as significant determinants for growth. The study was given to incorporate understanding of the urban environment. Secondly, the study was directed towards making a contribution to the development of that city. A student study of a prairie city, provided with street plans and all the necessary data by the Provincial Government, could perhaps challenge the thinking of the administrators and citizens to become aware of the latent energy within the city. In this way it is hoped the study will prove beneficial.

Portage is a Prairie City. The summer and winter climate of the prairies affects the way of life within its spaces. If we are interested in improving our experience in these spaces we will have to learn to exploit the sky, the sunlight, the wind, and the open vistas. The defence from or the development of these natural elements can create a richer visual environment for Portage la Prairie and its people.

The location of both railways and the Trans-Canada has made an indelible mark upon the form and way of life within Portage. Water is a refreshing visual element in the Prairie Landscape, and the presence of Crescent Lake is unsurpassed as a natural visual resource for the city. The value of the shoreline and the Island, created by the natural high water table could be exploited in the future development of the city.

The analysis and conclusions were intended to remain as objective as possible. Following the tabulation of the research material, each student considered the data and established his assumptions. These assumptions were considered to be within the present predicted limits for the future development of the City of Portage la Prairie.

CONCEPT

THE CITY IS A GROWING ORGANISM
THE CITY IS A MEETING PLACE

We are living in a constantly CHANGING world. The direction of changes is unpredictable. Planning criteria is reduced to constants.

1. SPACE — occupied by man;
2. SOCIAL EXCHANGE— man — family community
3. EQUILIBRIUM — internal / external — environment — homogenized / centralized

The containing structure should be: mobile, adoptable to changing needs.

ESSENCE: is a SYSTEM which is flexible with regard to permanent and changing factors.

The city is composed of:

1. Permanent structure: Long lasting, establishes a definite physical form for the city, tends to decide the overall system of the AGE. (communication system, services).
2. Changeable part: Shorter lasting, gives individual character, it applies to the local (buildings).

The elements in the city are:

1. Objective: neutral and fixed (structure, services)
2. Intuitive: character formed by inhabitants.

Portage la Prairie came to life at the crossings of communication systems. Just as cities develop at crossings, cores develop within cities at the crossing of major routes — at entry points where roads merge or where a significant deflection occurs. The cores are based on the pedestrian, thus walking distance is the determining factor in their position. There is a higher density of social activities at these points, with the size proportional to the population surrounding it, and its distance from the central node — which is regional in character and has the highest intensity of activities along with the highest density of living.

The form of the city is the reflection of the importance of the amenities. Crescent Lake is the most prominent, while the link to Winnipeg, Lake Manitoba and the surrounding country is secondary.

The form is also strongly influenced by the climate. This is reflected in the minimum exposure to the North, and maximum exposure to the South. Geography is reflected in the form. The city turns itself onto the lake for the provision of good view.

The development of the city will concentrate along Saskatchewan Ave. which will be the backbone of the city and serve, not dominate the community. The present street system will be the basis for the future by forming dead-end streets with communities based on walking distance in between.

The importance of social intercourse is strongly reflected in the organization of the living units. Social facilities polarise towards higher density in living and the major traffic routes, with these components supporting each other.

ASSUMPTIONS

Prairie cities came to life at meetings of communication systems. This meeting point generated the life of the city, which in turn grew towards certain amenities from here. The amenities were natural (river, lake) or a large Urban Centre (Winnipeg). The form of the city thus became a direct reflection on the degree of importance in amenities.

The growth of Portage is assured because of its importance as a transfer point on the communication routes. Portage is the only place in Canada, where the two major Railroad Lines and the Trans-Canada Highway conveniently meet, and Portage could be an excellent place for a transfer point from one system to another. This transfer would generate processing Industry for Farm Products and Storage Facilities.

These Industries would be a strong basis for the

economic stability of the community.

Portage would continue to develop along Saskatchewan Avenue, following the present trend.

With reduction in working time the problem of leisure time is of importance. Portage enjoys a very favorable location in respect to recreational facilities (Lake Manitoba, Assiniboine River, Crescent Lake).

ASSUMPTIONS:

To any planning problem, the designer is forced to make various assumptions in order to predict future conditions and trends. Group Three made the following assumptions based on our economic and sociological studies of Portage la Prairie and its surrounds.

1. Over the next thirty years, the Portage Plain will become the centre of a flourishing market garden industry. The development of this new crop will not significantly affect the present grain crops.

2. The processing and servicing industries centred in Portage la Prairie to handle the new crops will increase the job opportunities within the town threefold over a period of thirty years.

3. A grain storage centre within the town will develop within the next ten years. This will be stimulated by the closure of the spur lines, which are currently serving the grain shipment industry. These new storage facilities served by the trucking industry, will be designed for rail haulage on the two principal transcontinental railroads, but will be readily convertible to any future methods of grain handling (i.e. pipeline).

4. The development of the Portage Plain as rich agricultural area has its limitations. Within thirty years these limitations will tend to stabilize the growth pattern of the 'city'. Further development on the Plain will be reflected internally within its commercial centre, or under exceptional circumstances, would stimulate the growth of another centre.

These then are our assumptions on which we base a planning concept:

CONCEPT:

The present living pattern of Portage la Prairie has evolved through blind necessity. If it is allowed to continue we feel that the town will never achieve its potential promise. Group three proposes an urban structure which we feel is compatable to prairie living and in particular the city of Portage la Prairie.

We found three major physical factors should be considered:

1. The Assiniboine River and Lake Manitoba waterway created a vital Indian Portage which saw the beginnings of the town. Today this route is no longer used, but the existing Crescent Lake bears testimony to the city's historic past, and now provides a unique prairie amenity.

2. As the focal point of what might be the world's richest agricultural area, Portage la Prairie has the opportunity to develop an intense agricultural industry.

3. Portage la Prairie is singularly significant as a node on the three major transcontinental transportation systems; the Canadian Pacific Railways, the Canadian National Railway and the Trans-Canada Highway.

The environment factors of a prairie community are less easily defined. A prairie farm—a homestead sitting within its shelter of trees and landscape — is a typical and familiar site. So it could be with a prairie 'town' — a cluster of homes closely knit for mutual advantage.

The agricultural community has a simple social structure. It can readily develop communal forms of living. Should not a prairie town be visually defined and physically confined? Does the existing sprawl of Portage offer a real sense of locality? Does it provide as good a relationship between home, community and religion.

This scheme then attempts to weld together the prairie environment with the agricultural community into a defined urban structure. This structure becomes a framework through which meaningful social intercourse can mature.

REDEVELOPMENT OF DOWNTOWN WINNIPEG

Architectural Design Three conducted an eight week study of the commercial core of downtown Winnipeg which was supported by the Metropolitan Planning Corporation, the Downtown Businessmen's Association, the T. Eaton Company and the Hudson's Bay Company stores.

This core of Winnipeg is suffering from a malaise which is common to most North American cities established under nineteenth century concepts of urban form. The physical manifestations of this condition are everywhere apparent: in the inability of existing traffic arteries to adapt themselves to increasing demands, in the incompatibility of pedestrian and vehicular flow patterns, in the lack of climatological considerations in overall planning, and in the incoherent form of the downtown environment.

The intention of this study was the investigation of the character and qualities and potential of the existing commercial core, primarily the area centred around the south side of Portage Avenue between Eaton's and the Hudson's Bay, and to propose possible directions of growth that might follow in order that expansion and development can occur in an orderly manner.

The first two weeks of the program were spent on a graphic analysis of the existing commercial core. A further week was allowed for lectures given by a selected group of professionals such as: Mr. G. Rich and Mrs. Rosalind Forbes of the Metropolitan Planning Corporation; Mr. B. Hryhoczuk of Metro Transportation Planning Engineers; Mr. R. C. Baxter of R. C. Baxter Limited (developers); Mr. A. Ginzberg of Wilaco Parking; and various other persons connected with the downtown business operations of this area.

It became apparent that the area selected offered all the major characteristics of a regional shopping centre with Eaton's and the Bay as the two shopping magnets at either end. After this period of gathering all available information the class pursued a synthesis stage in three separate groups. Each group chose varying points which they felt were most significant and incorporated these factors into their solutions.

All three groups felt the need for bringing back into the commercial core the type of leisure time activities that make for full use of the 24 hour cycle of life. The solutions show, therefore, an art gallery, library, restaurants, night clubs, movie theatres, recreational facilities both indoor and outdoor, and even high density housing grouped within the retail areas.

GROUP 1

The existing backlane to the block south of Portage Avenue, was considered by this group to be the prime generator for future development for the commercial district. By essentially leaving the existing building pattern intact, this group's solution appears to be the most feasible. With the utilization and the reinforcement of the existing circulation pattern Group 1 developed the back lane into a more meaningful form. Retention of the basic service function of the back lane at ground level and the addition of an overhead pedestrian mall with access shops to existing buildings provides a more efficient use of available building volumes. A realistic approach was also applied to the vehicular movement patterns. The major alteration to the existing street patterns was the rezoning of one traffic artery running east and west, for public transit systems only. A terminal for public transit connected by an overhead plaza to the pedestrian mall was established. In order to ease the parking problem the solutions provides for an underground automated parking system beneath the zoned public transportation artery.

GROUP II

This group essentially took the block south of Portage Avenue and redeveloped it into one continuous shopping mall stretching from Eaton's to the Bay. It involves replacing the existing buildings with a continuous structure that encloses an indoor type shopping spine, complemented by a series of outdoor spaces and functions. A conditions of choice is hence created where the climate and people activity elements are placed on more compatible terms. Constant outdoor activity was encouraged in an area which is presently devoid of such an amenity. Pedestrian circulation systems within the shopping spine were designed to facilitate access from the mall to the outdoor areas at all levels of the structure. An awareness of the exterior environment was always available within this system. It could possibly be operated under the joint ownership or on a condominium type leasing plan.

GROUP III

The students of this group took Portage Avenue itself as the prime generator of development, thus including the north side of the artery within the area. A system of shear walls and Verindale trusses in combination with spiral parking ramps using the air rights over Portage Avenue provides for the integration of structure, parking and retailing within a single prototype unit. The shear wall system was initiated on the principle of planned obsolescence. The structure spanned over existing blocks facilitating a downward growth upon deterioration of the older buildings. Vehicular access to new commercial and residential areas above the present building fabric was provided by the spiral parking ramps located on Portage Avenue. The ramps permitted a thorough penetration to the system at various levels. A three dimensional circulation pattern allowed a complete hierarchial range from the vehicular high speed level to the slow pedestrian level, which applies a much needed consideration for the inherent needs of each component in the circulation system of the area.

ARCHITECTURE, ECOLOGY AND FORM

by Ian L. McHarg, August 16, 1965

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INTRODUCTION

The most astonishing aspect of modern architecture is the slender basis for its form. The precursors made Technology the God, function the demi-god, and having so done were predisposed towards the expression which Theo van Doesberg, Mondrian, Oud and Le Corbusier proffered. But Technology is a mere handmaiden of engineering, function is relevant only to simple inert artifacts and the cubism of van Doesberg, Mies and Skidmore only a fragment of form. If you doubt this, observe the phenomenal world and its inhabitants. "Form follows function" was the manifesto but it was proclaimed as if Darwin, Wallace, D'Arcy Thompson, biology and morphology had never existed.

This manifesto was so narrow as to be obstructive rather than illuminating. Function was considered in mechanical rather than organic terms, it selected structure and technology as the major functions to be expressed. "Machine a habiter" reveals this narrow view but physical and biological evolution cannot be examined or comprehended as mechanisms.

The natural scientists perceived that form and process were indivisible aspects of a single phenomenon. That which is seen to be is an aspect of what is. In order to explain what is in terms of form, requires the invocation of all physical and biological evolution — as process — organism, environment, adaptation and consequent morphology. The physical scientists, accumulating evidence of geological history as the explanation of modern physiography, the biologists organizing the diversity of life forms into an evolutionary lineage, perceived above all order in complexity but architecture chose simplicity alone. Natural scientists perceived form as an historical process of

adaptation to environment, unique to the family, the species, the individual. Architecture chose an international style, irrespective of race, color or creed, latitude, longitude, elevation, place or history. The natural scientist perceived context — cosmos, galaxy, solar system, earth, place, the synecology of communities, the autoecology of the single organism, the cell and atom. Architecture perceives the building, removed from context, the expression of the architect's psyche, effective for genius, perhaps, but inadequate for the rest.

Yet in antiquity, Vitruvius and Varro spoke of these things.

Nobody venerates Technology as a God today, it is a good mechanic. Who believes that "Form Follows Function" for anything more complex than cups, saucers, rockets and planes? Is simplicity the appropriate expression for anything as complex as a city, community, family or a man? Is it simplicity or simple-mindedness?

Architecture chose a 19th Century mechanic's creed, "Form Follows Function." It selected and still does, simplicity rather than complexity — the pure prism; uniformity rather than interdependence — every architect a prima donna, every building an isolated testimony to the architect. In this selection it assumed the mechanic's view of the world. It disdained the evidence of all physical and natural science which held that form and process are indivisible. The term process includes dynamism and incorporates all physical and biological evolution. The natural scientist saw complexity, diversity and interdependence as evidence of stable ecosystems and low entropy. The criteria of architecture — simplicity and uniformity are seen as evidence of instability, primitive systems and high entropy while independence is unthinkable. Interdependence characterizes the natural world, the complex interactions defined as symbiosis.

The time has come for a review of the basis of architectural form. The present basis is arid, limiting and inadequate. It must move into the 20th Century and, in its pursuit for form, must embrace the scientific inheritance. This essay is directed to the illumination which the natural sciences, particularly ecology, can provide.

Wherein lies the basis for a modern architecture? I believe that it must begin with ecology, respond to social institutions and end with art. I will only speak to its beginnings. If architecture is, as Kahn has said, the making of meaningful form, then its basis must be ecology for the identity of the place and its meaning lies in the perceptions of this science.

ECOLOGY AS THE BASIS FOR FORM

What is ecology? It is that branch of science which investigates the relation of organism and environment which latter includes other organisms. Architecture begins with a white sheet of paper, docile, awaiting the marks of arbitrary order, T square and triangle. Ecology begins with the place. What history of geology, mounting building and erosion, ancient seas and uplifting occurred on this place for it is these what have given basic form? What successions of life have occupied this place for these have modified it? What is the nature of its underlying rock, its soils, microorganisms, water, atmosphere, the plants and animals upon it? These explain its present aspect. Processes are dynamic, they are continuing, here, latent in the place, lies the form of the future. Finally, natural processes have values, perform work and exhibit both opportunities and restraints to development, they reveal their intrinsic form and imply made form.

The training for architecture, the pursuit of meaningful form, should be basically identical to landscape architecture. It requires an understanding of historical geology and modern physiography, an exposure to botanical and zoological evolution, an understanding of ecology, communities, plants, animals and morphology. This is the sine qua non for an understanding of basic morphology, the given form. Only when this is understood can the form of man be added as an adaptation to a given environment, as a dynamic process, — the made form.

FUNCTION AND PROCESS

Function is a useful conception in statics and dynamics but this utility resides only in inert systems. It cannot enter the biological world save as subject to the larger conception of process. Process is defined by Fosberg as "a sequence of directional operations with feedback". An organism makes a choice which affects

subsequent choice for itself and other organisms and has an effect upon the non-organic environment. The reaction to the choice and the transformation of the environment affects both organism, environment and subsequent choice. Evolution is directional, from simple to complex, adaptations are continuous, adaptations are reflected in form. Architecture is an adaptation to environment.

I suggest that the narrow concept of function be rejected in favor of the more embracing concept of process. Process invokes all of physical and biological history, evolution and ecology. Process has intrinsic form, form reveals past process and present reality. They are indivisible. Thus, the search for form must begin at the beginning. The place reveals its entire history, everything that has happened is written on the place, its geomorphology and biomorphology.

Norbert Weiner described the world as consisting of "To Whom It May Concern" messages. Lou Kahn has spoken of existence will, the will to be. The place is, it speaks, its form reveals its history the messages do concern architects. As life is transmitted only by life, so form made can only proceed from form given. But largely, as we have seen, the messages fall upon deaf architect's ears. Form frequently follows from preconception unresponsive to the hidden voices and the mute form.

What processes are involved? Reasonably one can begin with the sun, the rotating earth, its inclined axis, day, night, seasons, longitudinal climatic variation and the behaviour of the atmosphere. Here begins terrestrial physical process, the basic rhythms. Next is the major work of the sun — evaporation and transport in the hydrologic cycle. The heliotropic leaf and photosynthesis begin the transmutation of light into the basic material of all subsequent food chains, provide all atmospheric oxygen, amelioration of climate and micro-climate and equilibrium in the water cycle. The accumulation of organic matter, living and fossil sunlight, in plants, animals and soil follows, in turn dependent upon the decomposer microorganisms which recirculate nutrients and birds, insects and animals.

This allows us to see the place, the site as process. Physical processes alone explain early geological evolution, mountains and oceans, plateaus and plains, uplifting and sinking, erosion and sedimentation. And these remain the major explanations for historical geology and modern physiography, the major climatic variations.

Yet life has affected great modifications, an atmosphere with oxygen changed the nature of insolation, colonization of the world by plants affected climate and micro-climate, stabilized the water processes and land surfaces and diminished the violence and disequilibrium of physical processes. Life has affected the pattern and distribution of the major chemical elements —oxygen, nitrogen, carbon, calcium, iron sulphur, the trace metals. Life created soils. Biological systems ensure the utilization, recycling and conservation of energy, nutrients and water in stable systems.

SIMPLICITY - COMPLEXITY

Dean Joseph Hudent once wrote of modern architecture, "Simplicity—at any cost." Simplicity was once thought an absolute good. In the revolution when the Beaux Arts tradition was banished, complexity was discarded with eclecticism—the baby was thrown away with the bath water. Only an adoration of simplicity can explain the expressionless prism. The end of simplicity justified the suppression of the elements of expression. Yet simplicity in ecology is equated with primitive life forms in unstable ecosystems. Complexity is a measure of higher life forms, with higher utilization and conservation of matter, more stable and enduring. A corn field is simple, a forest complex. The first is composed of a large population of a single organism, vulnerable to disease, natural catastrophe, unable to regenerate itself, arrested at a low point in evolution, low in order, high in entropy. The forest is the exact opposite, complex, diverse habitats exploited by diverse inhabitants, many paths for energy utilization, high conservation of resources, stable, resistent to epidemic disease and catastrophe, enabled to regenerate with low entropy.

Simplicity as a goal reflects the simple view of architecture rather than the criterion of the phenomenal world where complexity is evidence of excellence.

UNIFORMITY - DIVERSITY

If you propound simplicity and multiply it, you find uniformity. If you examine complexity, you observe diversity. In the organic world every atom, cell, or-

Rooftops, Aegean Islands pp 52
Ventilators, Sind District,
West Pakistan pp 54
"Townscape", Isfahan pp 56

Illustrations from "Architecture without Architects",
by Bernard Rudofsky.

ganism is unique, order does prevail but uniformity does not. The uniformity in the forest results from the incapacity to observe the diversity. Where uniformities are observed, they are the product of statistical abstractions rather than observed reality. In contrast, the slender vocabulary of architecture — tower, slab, shopping center, rancher and split level are testimony to the uniformity in which uniqueness and diversity are ignored or suppressed.

INDEPENDENCE - INTERDEPENDENCE

One of the most serious indictments of modern architecture is the proclivity to design single buildings as individual expressions independent on context. At best, this can provide an island of excellence in a sea of horror, the median is a complex of minor monuments, the worst is a sea of brash disorder. The analogous concept of the individual is a precious one but in excess it constitutes anarchy. No organism can survive alone. Symbiosis, the indispensable interactions between organisms, is the rule of the living world. This has its expression in what Lawrence K. Frank describes as "Organized Complexity". In this interdependence, not independence is the rule. The white paper must show the context as given so that the building, responding to its fellows and its situation, derive from, respond, and contribute to its environment. As for man, no building is an island unto itself.

PROCESS AND DIFFERENTIATION

The arctic differs from the tropical rain forest, tundra from the ocean, north temperate forest from desert, mountain plateau from delta, each is itself, because. The platypus differs from the seaweed, the diatom from the whale, the monkey from man, because. Negro differs from Oriental, Eskimo from Caucasoid, Mongoloid from Autsraloid, because. Every family, species, organism, cell, atom, nucleus, proton, electron is process and form is a superficial expression of all of these.

The sun rises and sets, seasons change, the plants and animals behave according to fixed patterns, each with its metabolism, dependencies and interdependencies, associations, expressions, life and death.

The white paper is a lie for upon it, unseen, is 6 billion years of physical change, 2 billion years of biological process and a million years of human evolution and the formal consequences are vivid upon to place for he who can see.

Yet unconscious of all this, the columns appear upon the white paper, the insensible building rises, east equals west, north and south, compartments result inexorably from column spacing and the spirit is constricted in Kuwait, Rio, New York and Oshkosh. The "To Whom It May Concern" messages are unheard, form follows preconception, spoken in foregin accents, and process remains unseen, excluded from form.

THE GIVEN FORM

When process is understood then form and differentiation can be comprehended, oceans and land, arctic and equator, mountains and marshes, volcano and iceberg. Coast lines, deserts and ice sheets advance and recede, lakes are in process of filling while others form, mountains succumb to erosion and other rise. The lake becomes a marsh, the estuary a delta, the prairie becomes a desert, the scrub a forest, a volcano creates an island while continents sink.

When processes are examined immediately the major world regions are distinguishable, each with its individual history, past and present inhábitants, and specific expression. The variety of sites can be understood, Venice and Lima, Rio and Kansas, Rome and New Orleans, Santa Fe and Bombay. Each has a distinct Landscape Identity — derived from historical geology, physiography and ecology — mountain, marsh, prairie, piedmont, delta and desert. Yet when each is examined ecologically, it is perceived that within the broad generic identity there are important variations. The first of these is the physiographic region. In the Philadelphia metropolitan area, for example, there are three: the Uplands, the Piedmont, and the Coastal Plain. Within these are areas of igneous rock, belts of limestone and vast depositories of historic erosion. Each has a specific expression, specific range of micro-climate, soils, plants and animals. Within each region, at a smaller scale, one can find ecological communities which in the Philadelphia metropolitan area would include open water, reed swamp, sedge meadow, secondary succession, local sub-climax, the mixed mesophytic forest, the Virginia Pine Association, the pine and the serpentine

barrens. Each of these in turn, is specific with its unique expression — each profoundly different from the other. Here lies, at the scale of region and site, the given form. Here are the unseen marks upon the white paper. Here lies the program for architecture, landscape architecture and planning. Not only is this the given form, it also has implications — restraints, opportunities and directions for the made form.

Each of the communities have specific expressions, profoundly different from each other. Yet they are linked and their relationship can be seen in a physiographic cross section.

Biological evolution began in the seas, marshes, rivers and colonized the land, advancing further from wet environments into more and more desiccated areas, mountains, deserts, arctic and antarctic. This evolution is reflected in the cross section from seas to mountains, the simpler plants occupy the aquatic environments, seas, rivers, marshes and elaborate towards the climax forest and then simplify towards mountain summits, deserts, tundra, taiga and ice sheets.

At the smaller scale of the Philadelphia metropolitan region, one can observe in one direction the cross section from river to hilltops — open water and aquatic communities, red swamp, sedge meadow, secondary succession, local sub-climax and the mixed mesophytic forest. In the other direction the same open water, reed swamp and sedge meadow leads into the Virginia Pine Community, to the Pine Barrens and beyond to the bayshore, the bay, the dunes and the ocean. The first cross section traverses the Piedmont, the other the Coastal Plain.

IMPLICATIONS FOR MADE FORM

One can accept that culture is fairly uniform in this region, a house, school, church, shop or office building is likely to vary little geographically in its space requirements and the relationship of its parts. In the same region physiographic and ecological characteristics do vary profoundly. The environmental factors of the coastal dunes are absolutely different from the mesophytic forest, the bayshore is totally different from the Pine Barrens, marshes have no identity with The Virginia Pine Community. If a building is indistinguishable in each of these communities, this can only result from an obliteration of their intrinsic identities and the failure to create a made form in recognition of the given form.

If we examine four of these ecological communities, then disparities will be apparent and equally clear should be the implications for made form. The four selected are the ocean dune, the mixed mesophytic forest, the reed swamp and the Pine Barrens.

Ocean dunes are recent and fundamentally unstable. Their stability is dependent mainly upon dune grasses, which, while tolerant to salinity, wind, low humus soils and sparse water, are fundamentally intolerant to man. If walked upon, they succumb. This environment is characterized by an extensive horizon, abundant sunlight, high glare, winds and blowing sand. It falls in hurricane paths and is subject to winter ocean storms.

Settlement in such an ecosystem is limited by several factors. The first problem is to sustain the dune grasses upon which stability and defense against the sea depends. The next factor is the paucity of water resources and the difficulty of waste disposal, avoiding ground water pollution. Water removals cannot be allowed to lower the water table to a point which imperils the vegetative cover. These factors set limits on development, its location and nature. The building is equally affected by environmental factors. Optimally it should be an open sunshade in summer and tight as a barrel in winter. It needs foundations for shifting sand and a roof anchored against hurricanes. If these factors are disregarded, the dune will become unstable, be breeched by the ocean and blow away, the houses upon it will be destroyed, overturned, or left stranded with their floors 20'0" above ground level. New Jersey offers abundant testimony to these consequences.

Consider the mixed mesophytic forest — beech, oak, ash and sycamore. This is a stable environment, the climax for the area. It provides deep shade and a rich but subtle variety of habitats. It is likely to occupy areas of topographic diversity with abundant water courses. Here is no extensive horizon, winds are muted, light filtered, it is protected from storms, generally free from hurricanes. Ground water resources are not likely to be abundant though surface waters may well be. Rock is likely to be near to the surface.

Settlement in this ecosystem will be limited by several factors. If buildings are sparse, the forest will remain. If settlement involves extensive clearing, the forest will disappear and a new environment will be created. Instability will be introduced, the plants which replace the forest will be poison ivy, japanese honeysuckle, goldenrod, briars, sumac and ailanthus — the plants of disturbance. Water courses will suffer from erosion and sedimentation, become turbid and polluted. If utilization oversteps the bounds of capacity, the remaining forest will suffer erosion and retrogress. Here the limitations upon the nature and location of settlement are determined by more factors, all more subtle than the dune. However, over-utilization will produce retrogression.

The built form is not subject to as great demands or to such an oscillation in demands as on the ocean. Light and shade, cool summer winds, adaptation to topography, to view, response to snow and ice are likely to be influential. Clearly the dune building and that for the beech-oak-hickory forest must be different.

Equally different from the preceding and each other are the two remaining environments — the reed swamp and the Pine Barrens. The fresh water marsh, saturated, has abundant vegetation, inconspicuous in winter but perhaps six feet tall in summer. It has an extensive horizon but without the glare of the sand dune. The water level will rise and fall. Wildlife will be abundant. Its soils are deep mud. Settlement which requires filling above water level, obliterates this ecosystem which is thereafter invaded by phragmites. Settlement on columns can sustain it without impairment. The building form must adapt to foundations on mud, a changing water level, provision of shade, columnar construction, resolution of light problems, the capture of summer winds, elevation to ensure view over tall vegetation and access from dry land.

The Pine Barrens are a unique ecological community. Most important is the fact that they are dependent upon fire. They will burn, sometimes with minor annual fires, often at longer intervals with more ferocious fires. This hazard to settlement is at least as great as hurricane danger on the dune. The principal plants are pines, oak and sweet gums. The forest is more open than the beech-oak-hickory forest. It overlays sands and gravel with abundant ground water, upon thin acid soils. There is little topographic variation.

Settlement in this ecosystem will be facilitated by abundant water and obstructed by problems of waste disposal. It will be limited by the hazard of fire and the instability of the environment if vegetation is removed and sandy soils exposed. Fireproof construction, management of the litter upon the forest floor by intentional burning, calculation of ground water level, will all affect the nature and location of development. The built form should be masonry, either sparsely located in the forest or associated in clearings. Paving for roads, parking should be of flexible materials to recharge ground water.

These examples, drawn from a single metropolitan area suggest the variety of expression which are possible within a small radius. How much more is this true for the larger scales — desert, mountain, tundra, prairie, northeast and southwest, major geographical regions and continents.

ECOLOGICAL TOLERANCE AND INTOLERANCE

As has been observed from the foregoing examples, certain ecosystems are tolerant to man, others intolerant. Equally certain environments are preferred by man, others rejected. It is necessary that both factors are considered, the optimum would be an environment preferred by man which was highly tolerant to him. Alas, these seldom coincide and so adjustment is necessary. In addition, as natural processes have values, do perform work and afford protection to man, it is necessary that development do not eradicate these values, obstruct the performance of work or destroy natural defenses. Examples of these processes would include control against flood and drought, perpetuation of agricultural and forest productivity, water catchment, air sheds, erosion control, natural water purification and others.

Earthquake areas and volcanoes, avalanche prone areas, hurricane paths and flood plains are clearly unsuitable for cities or towns. Dunes protect from flood as do marshes and forests in different ways, ground water may be more valuable than the land above, certain forests depend upon fire and are thus dangerous. Forests ensure equilibrium in the water cycle,

modify climate and micro-climate. Certain soils are inordinately productive while others are constitutionally unproductive. Natural processes perform work, are discrete, have value and vary in their tolerance to man. To understand this is to perceive suitability or unsuitability for development, the relative value of natural processes. To do this ensures the perpetuation and operation of these vital processes and the given structure of development.

The conception of tolerance and intolerance, friability and permissiveness, completes the formal implications of ecology.

From this science the morphology of the plant or animal can be understood as can the variety of habitats, the great regions, their history and their prospect. The perception that reveals the process and form of the plant reveals form and process of the coral atoll and the termitery, the beehive. It reveals the process and form of stilt dwellings, the igloo, the beehive hut, and the kraal. When one re-examines the ancient literature, it is seen that ecological considerations were important to Vitruvius and Hippodamus, and their investigations were very sophisticated. Today we are discovering that the incidence of tràce metals in environments have an important relationship to various diseases. The ancient Greeks killed a grazing animal from the prospective site of a village and discerned that it was normal or abnormal from its offal. In so doing, they checked the incidence of trace metals, a technique we may utilize in the not too distant future.

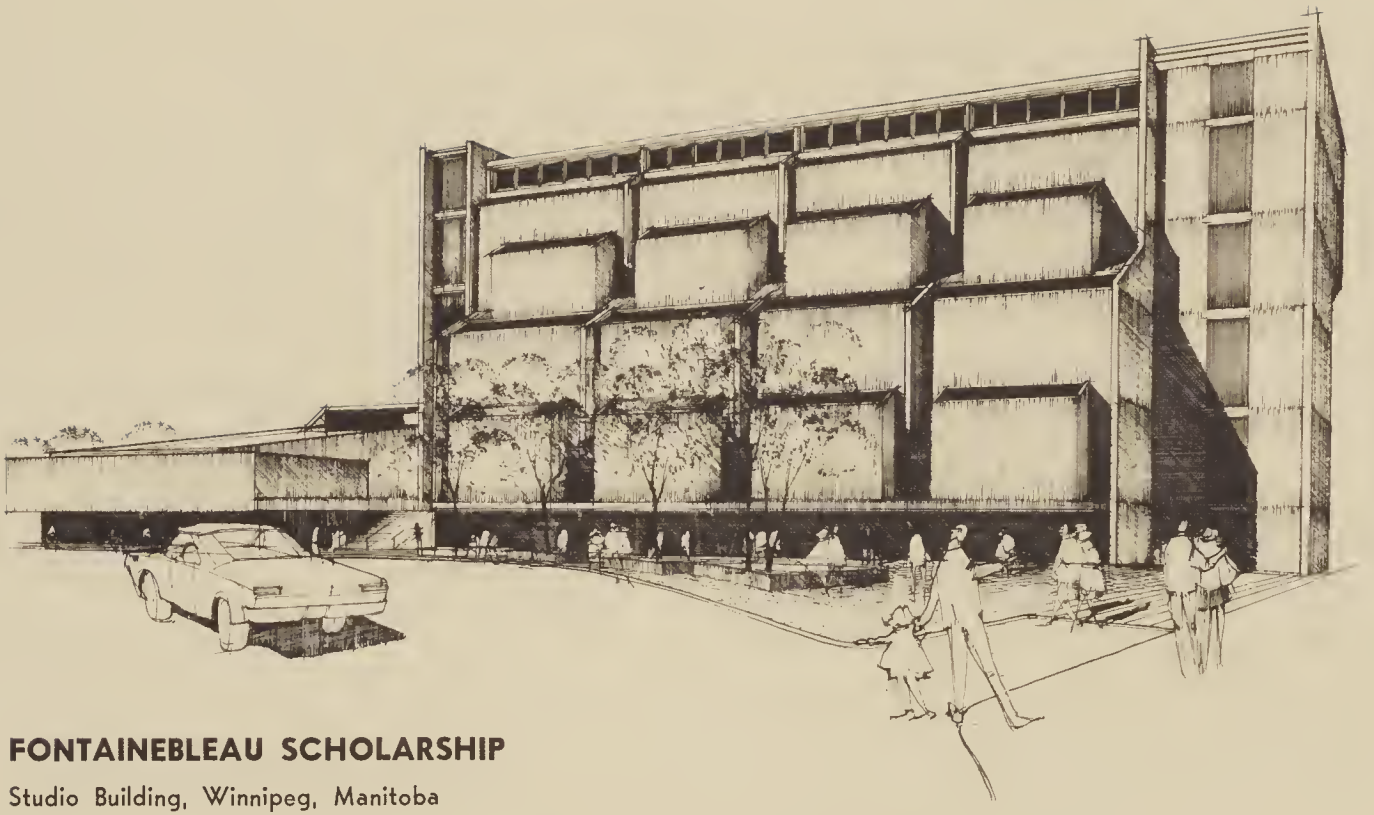
Indeed, understanding and response to natural processes can be seen in the enduring vernacular architecture and city building in every culture and epoch. It is conspicuous in the peninsular and island architecture of Greece, the hill towns of Italy and medieval villages. It is basic to the English 18th Century Landscape Tradition, (a precursory ecology), the historic expression of China and Japan, in Architecture, town building, agriculture and, finally, garden making. It is apparent in the isolated projects of modern architects, conspicuously Frank Lloyd Wright and Alvar Aalto.

The failure to respond to natural processes which were known to the ancients, is reflected in the rise and fall of great civilizations. It does explain the demise of the ancient cultures based upon the Tigris and Euphrates, the decline of Greece followed the despoliation of rich, productive valleys and forested mountains by men, goats and sheep. The effect of Roman culture, in similarly impoverishing the environments of Italy, Sicily and North Africa contributed to her decline. These processes extended to the present, explain the poverty of the Mediterranean today. The expanding deserts in Africa, the dustbowl of the midwestern United States and the poverty of Central and South America are modern examples of similar ignorance and disdain.

At the level of architecture both North Africa and India offer classical examples of ignorance and disdain of natural processes with results of supreme folly. In both examples the climates were hot and arid and with high glare, yet cold at night. In both cases, the Muslim tradition of architecture was highly developed, superbly adapted to climate, a simple technology and abundant native materials. Thick mud walls, small aperatures, internal courts with fountains and plants, cool by day, comfortable at night — a miracle of skill in adaptation to climate, micro-climate, materials and construction. Enter the modern architect complete with preconception and formal vocabulary. The solution — reinforced concrete apartment buildings which are unresponsive to sun, glare, heat, cold, climate, micro-climate, open space or society. Indeed, a malevolent architect, intent on constructing ovens for slow incineration, could hardly have improved upon this irrelevance. In contrast the vernacular, responsive to natural process, ensured that layman, poor, indifferent and excellent architects alike, all worked within an appropriate and accepted canon of forms, ecologically based. This is the context of simple excellence which genius can transmute into art.

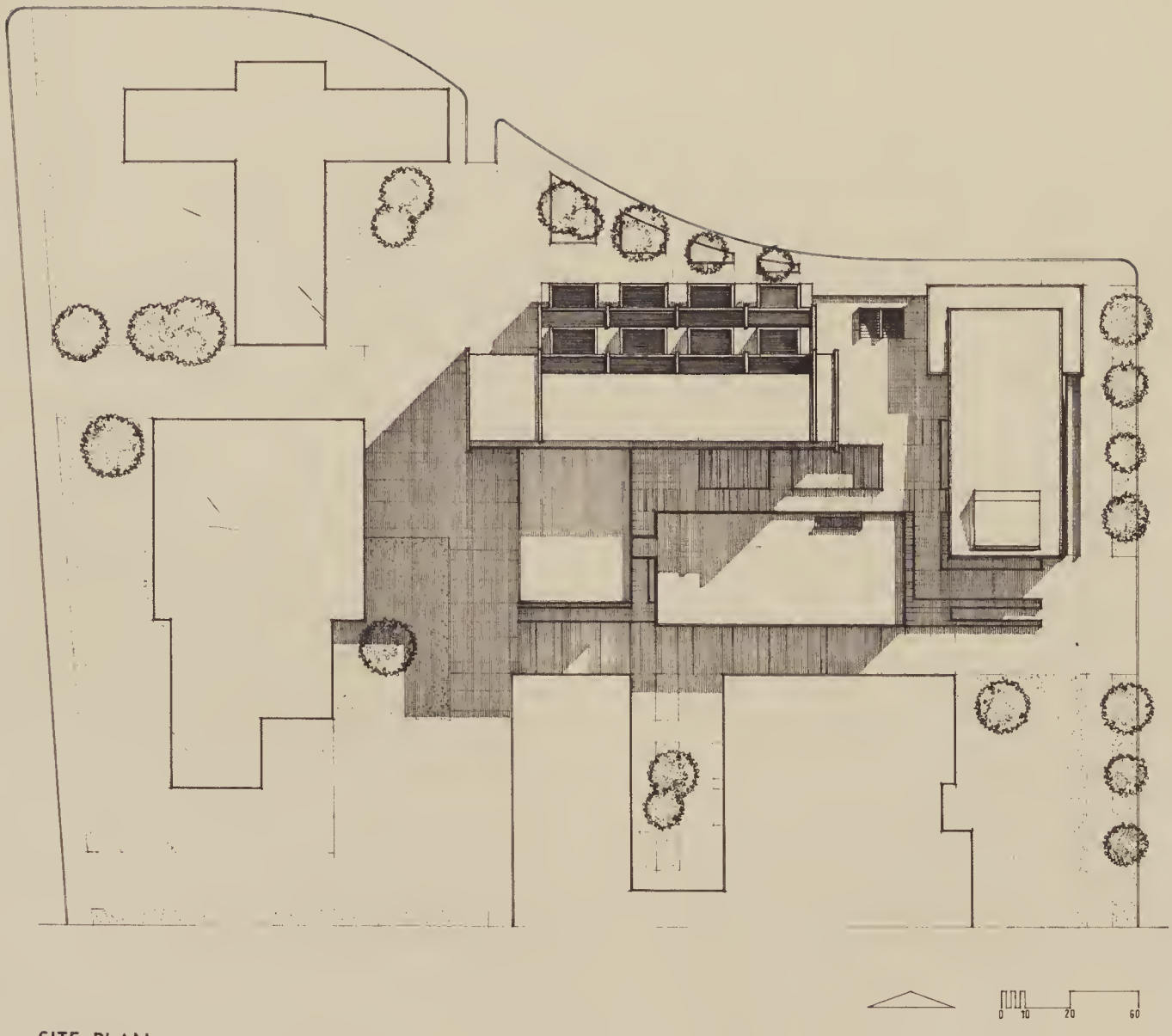
The suitcase silhouette, the inevitable podium and columnar structure, the faceless anonymity derive in part from the poverty of the basis for form and the disproportionate dependence upon structure. The pursuit for meaningful form must be extended beyond this narrow spectrum. It must include physical and biological process, ecology, the given form, and its implications for made form.

Form and process are indivisible aspects of a single phenomenon. Understand process and form will be implied if not revealed.



FONTAINEBLEAU SCHOLARSHIP

Studio Building, Winnipeg, Manitoba



SITE PLAN

SITE

The site is located on the periphery of an existing residential area presently inhabited by much of the city's artist population. The provincial capital is located just to the west and the glass curtain wall of a government office building across the street on the north reflects the studio tower.

CONCEPT

The building is conceived to serve the cause of general culture by generating a high concentration of activity for artists, critics, and the public.

Accesses on all four sides of the building merge both transient and terminal pedestrian traffic.

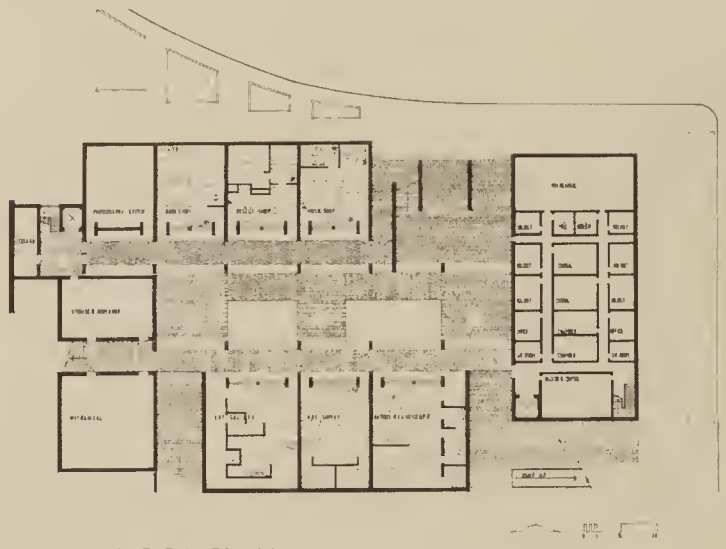
In a congregation space — the open court areas in the centre of the building — where one can stop, or sit and watch the passing show.

Public spaces are zoned on the ground floor; semi-private and private retreat progressively higher from general circulation.

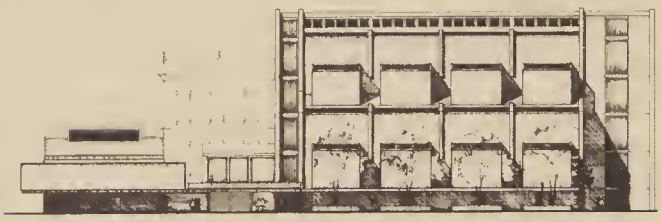
Roof terraces for concerts, for reading, and for private use of resident artists give views in all directions forming strong visual connections with the surrounding residential area and government buildings.

Concrete structure used throughout the building makes possible a plastic functional arrangement not tenable with other structural systems. The power and dignity of unadorned concrete as finish material is exploited in most of the building.

SECOND FLOOR PLAN

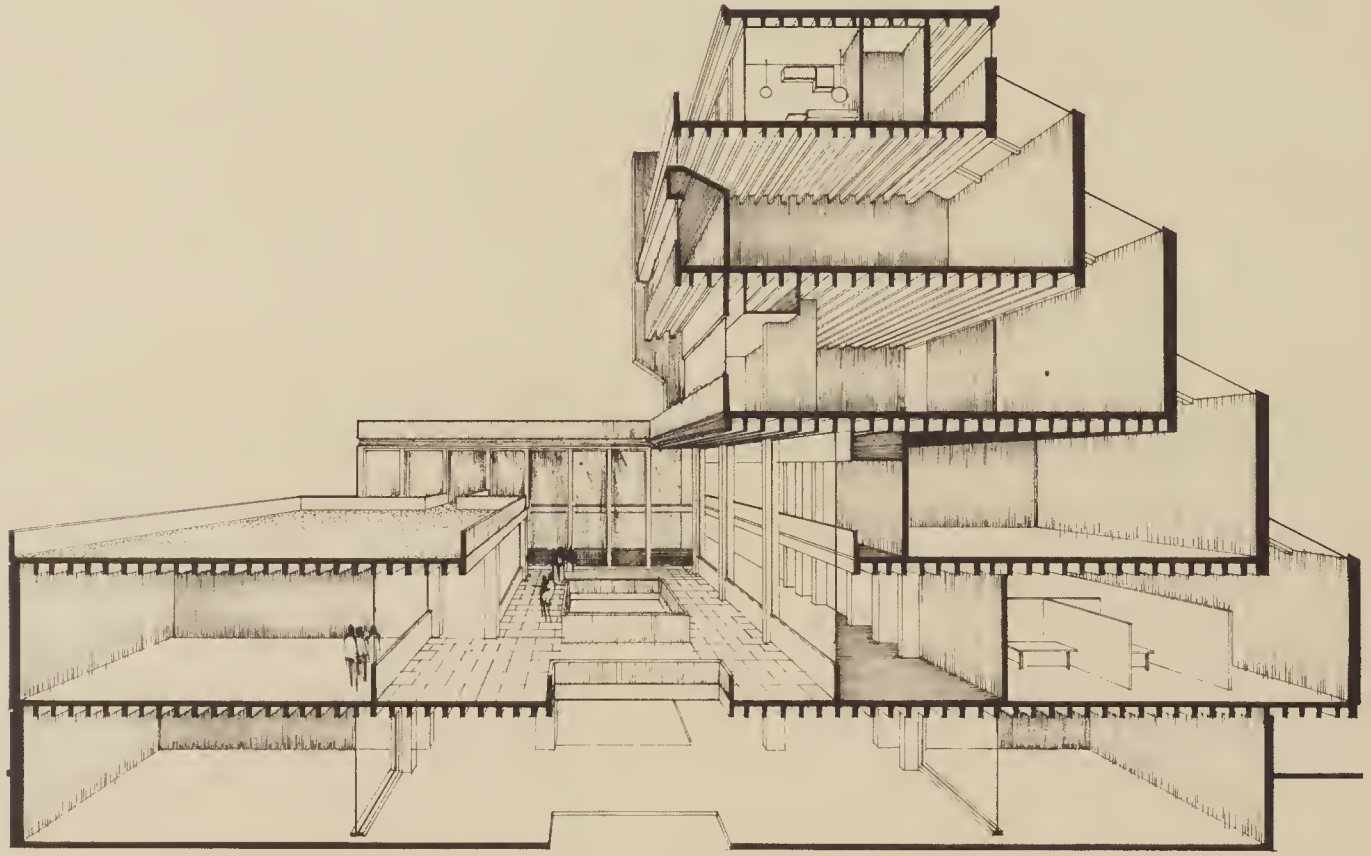


GROUND FLOOR PLAN



North Elevation

East Elevation



SECTION A-A

OFFICES FOR THE BUILDING PRODUCTS COUNCIL OF MANITOBA

At the present time, representatives and agents for various companies dealing in supplies for the Building Industry have separate show rooms. Often these are in widely scattered parts of the city and client contact is difficult. These representatives are at the present time organizing a Resources Council with a view to providing central offices and display space for better liaison between themselves and prospective contacts such as Architects, Interior Designers, Builders, and selected members of the general public. Membership at this stage should reach one hundred. For the time being, the representatives will keep their own offices, but in the future if this stage is successful, it is probable that a large office building will provide a Merchandise Mart. such as have been built in other large centres.

One floor (in part) of an Office Building in Winnipeg is being rented and the object of this design problem is to provide facilities for this group with the following requirements in mind:

A Reception Entrance where several inquiries could be handled at one time. There should be easy access to field material.

Filing Space for all the literature, pamphlets, prices, etc., of each member firm. This will be kept alphabetically in filing cabinets. This must be readily available to the receptionists, but would also be used by Designers, etc., who might wish to find the information by themselves. Any literature too large or bulky for filing cases will be placed on shelves (though no actual samples will be placed in this area).

Sample Display Area Actual samples of materials, together with catalogues, etc., should be found in this display area. These sample cases should be very carefully and thoughtfully designed to enable maximum display with minimum congestion. Many samples should be included but as space is at a premium, units must be designed with much ingenuity. After due thought, each student should propose the unit space which would be made available to each member, and the design of the fixtures concerned. Some agents carry several different lines but it is likely that the manufacturing company will choose to rent the space to display its materials. As the representatives will not spend much time at the centre, the information must be easily available.

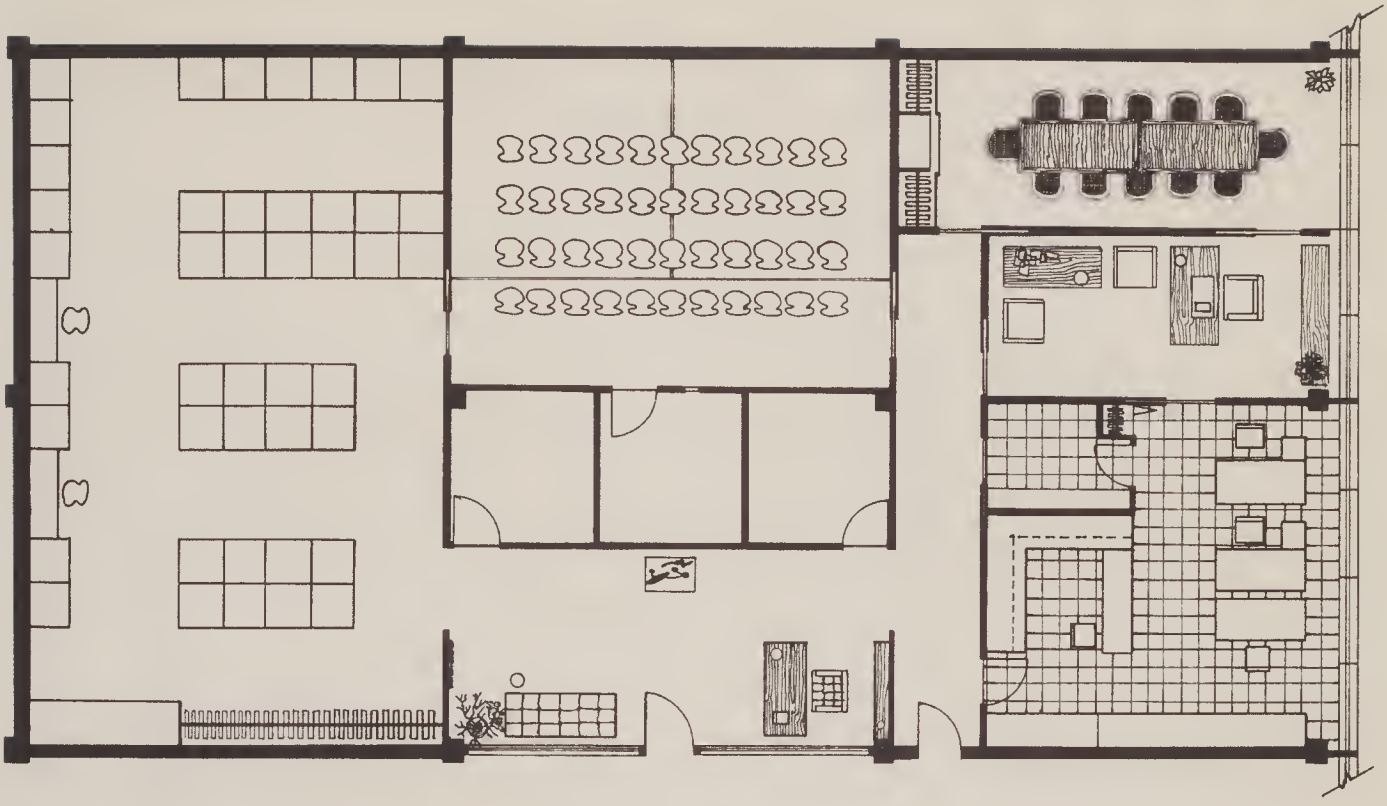
Four small Exhibition Rooms which may be rented by member firms at times to introduce additions to lines, etc.

A larger Exhibition-Assembly Room where a member firm might provide an illustrated lecture (seating approx. fifty) or even might entertain at cocktails. It would be desirable for this space of Exhibition rooms to be as flexible as possible, to provide a meeting room for full Council membership when necessary.

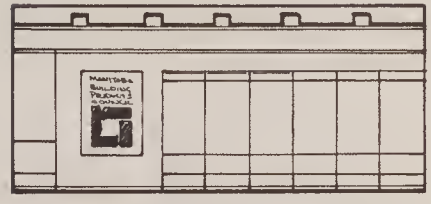
A Board Room for an Executive of twelve.

Office for an Executive Secretary — a private office which should be available to both public and office staff.

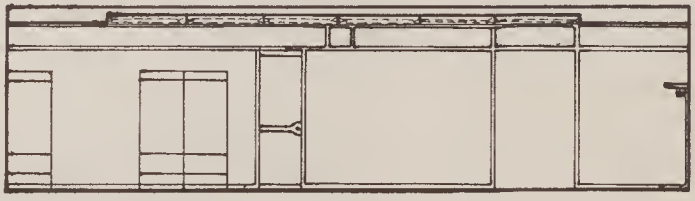
General Office for a permanent staff of two stenographers, one bookkeeper, and on office boy. Office equipment should include forty standard filing drawers, 30 sq. ft. for machinery (this is horizontal work surface and does not include standing space), and 50 sq. ft. of wall area for storage of office supplies, etc. (2'0" deep).



PLAN



North Elevation



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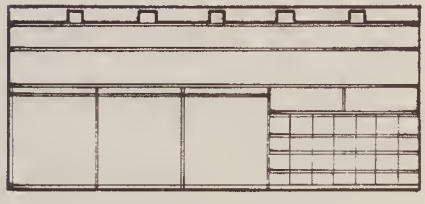
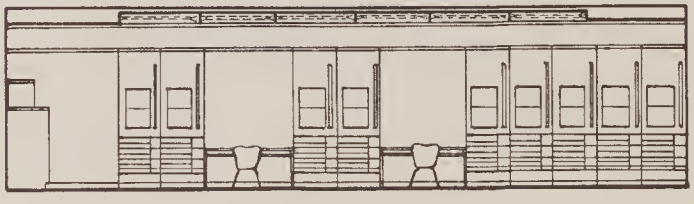
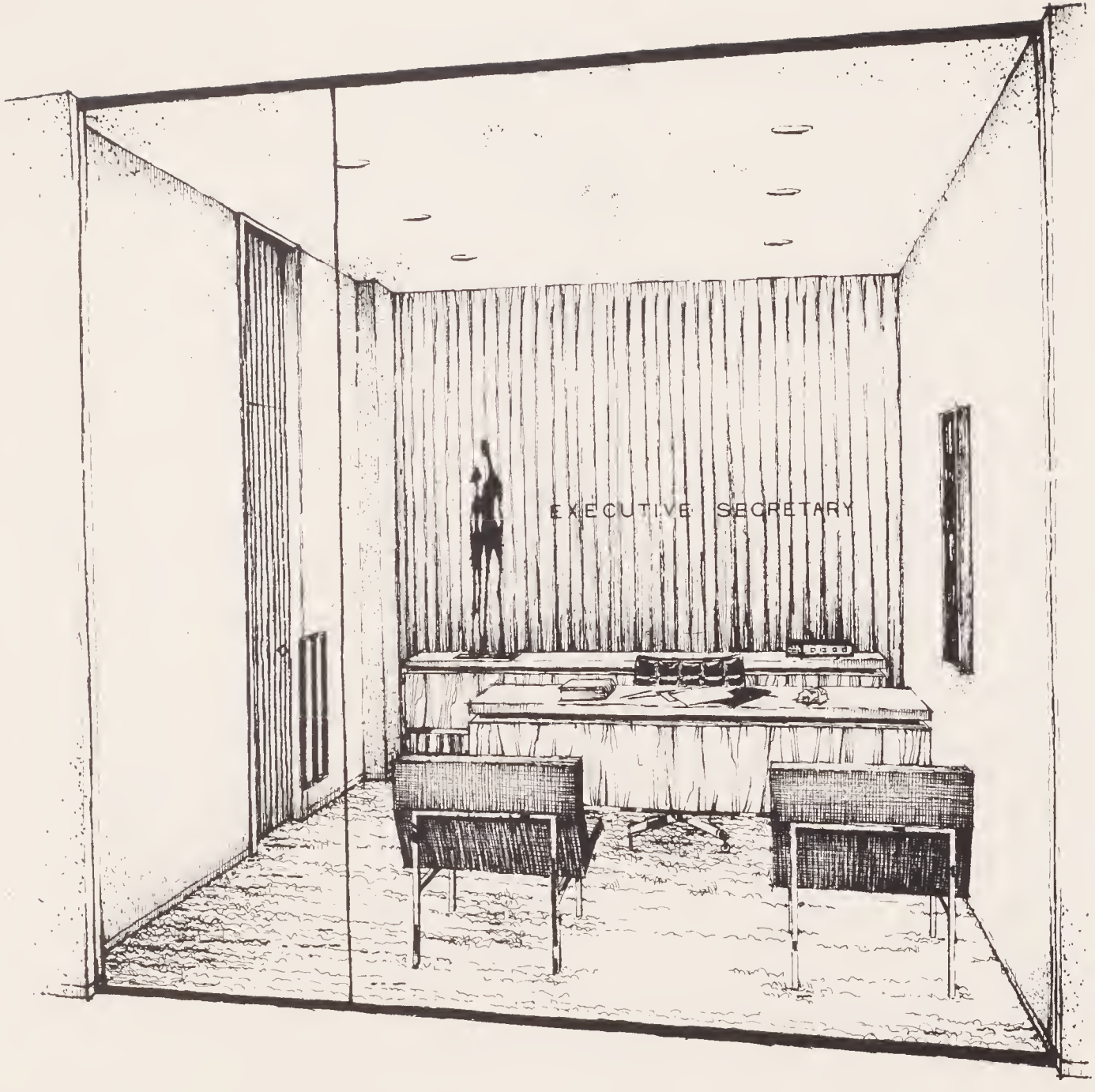


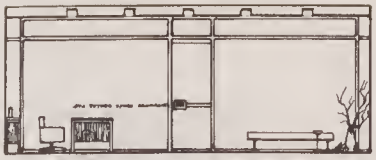
South Elevation



West Elevation

SAMPLE DISPLAY AREA

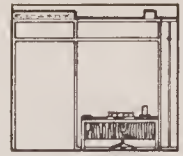

EXECUTIVE SECRETARY



South Elevation

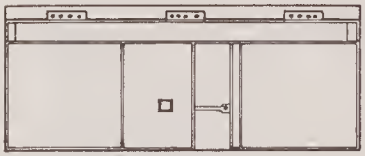
West Elevation

North Elevation



East Elevation

RECEPTION AREA



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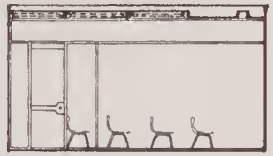

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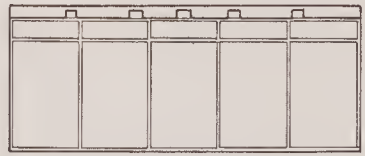

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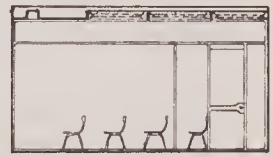
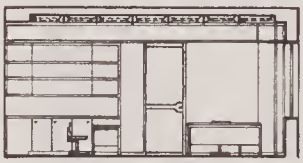


West Elevation

ASSEMBLY ROOM



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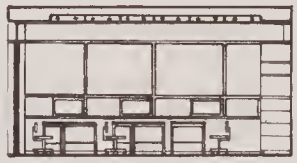

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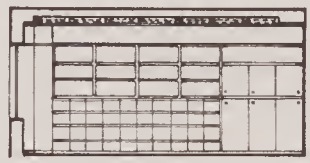

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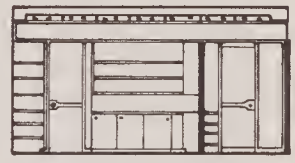
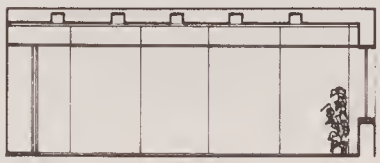


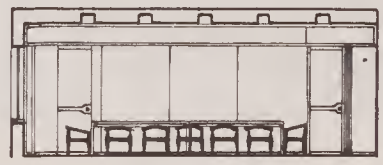
West Elevation

GENERAL OFFICE



North Elevation

East Elev.



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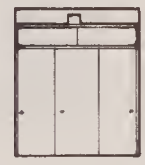
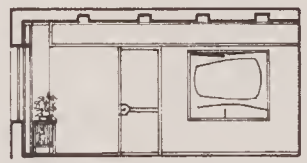


West Elev.

CONFERENCE ROOM

North Elevation

East Elev.



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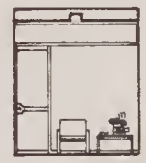
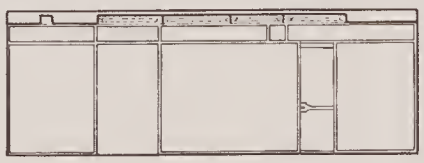


West Elev.

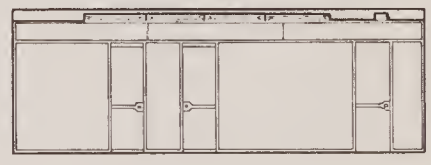
EXECUTIVE OFFICE

South Elev.



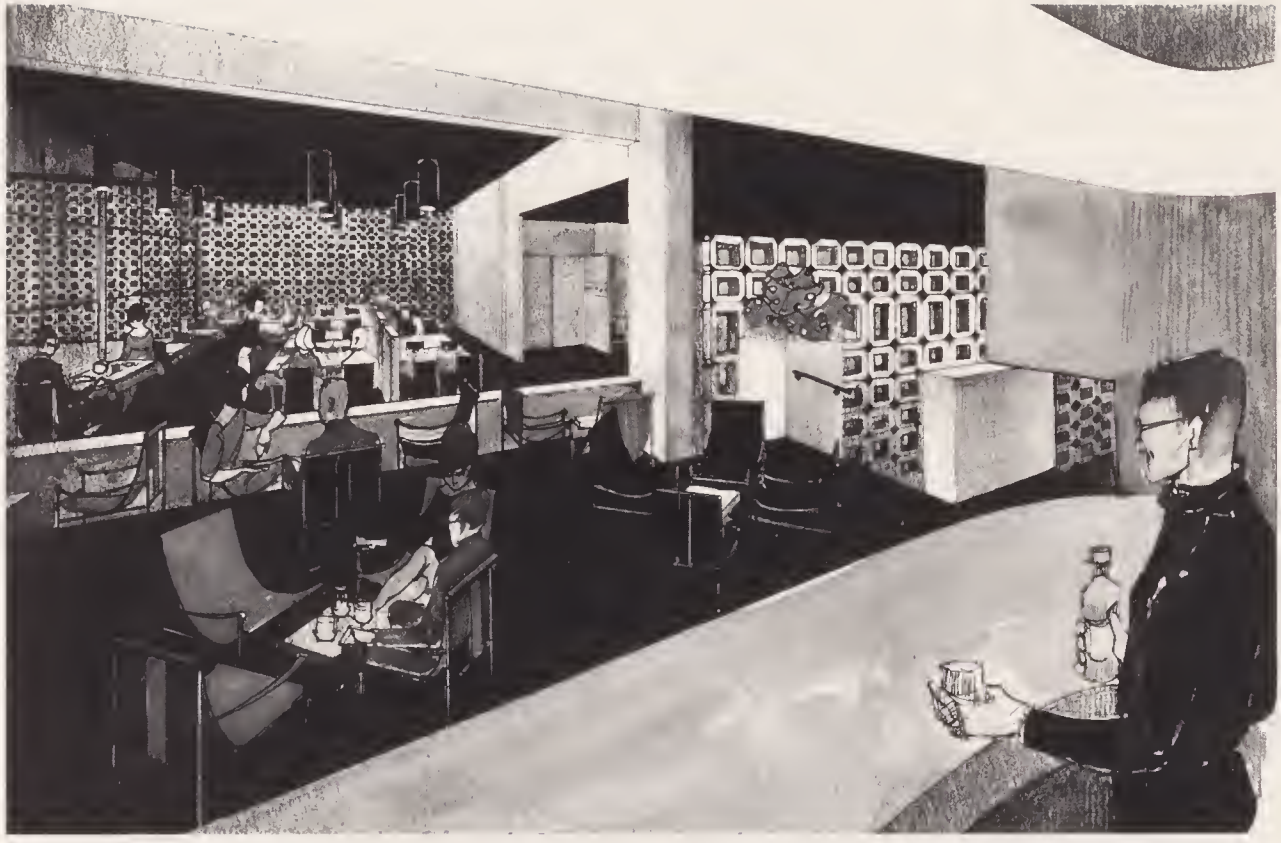
West Elevation

North Elev.



East Elevation

CORRIDOR



A Restaurant

The ground floor of a down-town Hotel in a large Canadian city is being remodelled. The management wishes to add a restaurant and an area 10 bays in size has been allotted to this.

The entrance to the restaurant opens from the main lobby of the Hotel and facilities for checking, wash rooms, etc., are to be found elsewhere and need not be considered in this plan. The appearance of the entrance from the lobby however is part of the problem.

The kitchen should provide facilities adequate for food preparation and service. Receiving and extra storage can be considered to be located elsewhere.

The size of the bay is 20'-0" x 20'-0". Columns are 12" square. The floor is concrete slab, the height is 15'-0" to the under side of the beams. Walls, floor, columns and ceiling are to have surface materials added.

The open court is to provide the only daylight.

The building is air-conditioned.

You are asked to provide a complete scheme, including theme, advertising, menu, china, uniforms.

The intention of the designer in the planning of this restaurant was to create 3 different environments without breaking the continuity of the flow of space and maintaining a unity of design throughout.

1 Dirty Dishes
2 Clean Dishes
3 Fish Plates
4 Salads
5 Hot Food
6 Cash
7 Small Refrigerator
8 Linen
9 Desserts
10 Preparation of Desserts
11 Wine Pantry with little window
12 Big Refrigerator
13 Cook's Table
14 Stoves and Ovens
15 Meat Preparation
16 Salads Preparation
17 Small Sink
18 Fish Preparation
19 Big Sink
20 Sinks
21 Service Table with Facilities for Coffee

These 3 areas can be reached independently from the entrance.

The public can turn right where intimacy and privacy characterize the area. The ceiling has been lowered throughout this general area to 10'-0", and individually to 7'-0" above each booth by the use of a concrete box of the same depth and width as the booth itself, which acts as light fixture. The light is extremely low so that no more than an opaque gleam emphasizes the texture of the concrete of the walls and the black leather of the seats.

The second area is the cocktail lounge, has been elevated 3'-0" and overlooks the dining room.

This has been designed to give the pleasing sensation of looking out at an open and varied space while being in an enclosed one.

The third area is the dining room proper where a more formal arrangement of the tables punctuate the space in a more regular rhythm. A great deal of space has been saved here by the use of low walls placed between adjacent tables so to give privacy to each table.


COURT CAFÉ

INTERIOR DESIGN EXHIBITION— WITHIN LIMITED MEANS

This was, of course, not a show that suggested a "do-it-yourself" approach, but rather the idea that with great enthusiasm and effort, talented Designers could help clients to keep within a small budget. It suggested that even young married couples could profit from consulting a well-trained Interior Designer. Specialists with constructive, intelligent imagination were able to find usable objects that suited the purpose, and could locate inexpensive, well-designed pieces of furniture for interior settings with a surprising amount of elegance.

The colour scheme throughout, with the exception of the children's room was muted; natural colours of materials with black and white. There were however occasional bright accents to supplement the youthful spirit showing through in furniture choice and activity suggestion.

Photo 1 — Dining Room

A ROOM DIVIDER was made by tie dyeing white textile in brilliant shades of blue and green with foils of magenta and orange. This screen proved to be translucent and an interesting effect was achieved in the next area by the glow from this panel.

Photo 2.— Activity Room

The FIREPLACE and HOOD were designed and made by the students, though for the exhibition the hood was only a stage prop. in its construction, and not intended to provide for a real fire. However the students found 300 bricks and 100 clay tiles from the Atlas Wrecking Co., they oiled each carefully and provided very acceptable basement or terrace flooring.

The dramatic PAPER MURAL was also the students' work. The resulting conversation piece was large in size but this idea is very flexible in area and scale. Brightly coloured dried flowers relieved the simplicity of the black and white mural, flowers from Design Associates — 75 cents a bunch.

Photo 3.— Children's Room

Bright primary colours, red, blue, yellow, green boxes with orange floor and white walls. (washable).
Butter box stools and storage wall for toys and books made from used butter boxes @ 30 cents

ENVIRONMENTAL STUDIES

The architect's role is that of humanist, artist and technician. As the organizer of human environment, he must analyze and understand human needs in order to synthesize and translate them into an ordered environment, building forms and spaces. As a creative artist, he must have his own aesthetic judgment and be able to explain and support it graphically, verbally and in writing. As a technician, he must know how to build, utilizing his knowledge and understanding of the disciplines and techniques of materials, structures, and mechanical equipment.

The new course structures is relatively simple to comprehend. The initial three years of study provide a Bachelor of Environmental Studies degree. This degree then allows entry into any one of the following four professional fields: Architecture, Urban Design, Interior Design and Landscape Architecture. A balanced and simultaneous training in the humanistic, artistic and technical spheres is now incorporated into the course of study.

The primary sequence is where the new program departs from the 'traditional' concept of program study. A pattern from general to specific institutes the sequential nature in the three corridors of study. The spine of the curriculum is the design corridor based on material which weighs most directly on the making of decisions whereby men can give more meaningful form to their environment. The design corridor is supported by two parallel streams, one of technical studies, and the other of the humanities and social sciences.

The technical corridor is the direct relationship of our ideas and their physical manifestation. The implementation of our ideas coupled with the organization of materials and methods based on broad principles rather than specific applications will enable the student to handle an increased scale demands.

The humanities and social science studies are intended to equip the student with a basic understanding of related human endeavor areas, and to instill in him a sense of importance of tradition as a binding element in the fabric of civilization. This development towards an appropriate concern for the significance of man is the single factor giving meaning to the environmental designer's sphere of activity.

These three streams of experience will be so integrated as to make the student aware of the spirit of synthesis, thereby preparing him for his task in society and developing his talent for the creation of a human environment which will fulfill the needs and desires of mankind.

THE STUDENTS' ARCHITECTURAL SOCIETY

The recent changes in the Architectural curriculum at the University of Manitoba have indicated a new awareness, on the part of the administration, of the need for increased student involvement in a broader sphere of human knowledge. These changes were brought about primarily by the efforts of our late Dean John A. Russell. His example in the academic field might well inspire us to reassess the role of the Students' Architectural Society.

If the Students' Architectural Society is to be a living, functioning organism, it must become more responsive to the winds of change which are presently beginning to re-vitalize the entire approach to Architectural Education on this campus and elsewhere.

For too long the S.A.S. has existed as a mere figure-head for the student body, being chiefly involved in the organization of internal social functions.

What is dearly needed is a deeper involvement of the S.A.S. in all spheres of student interest from course structure to relations with the practicing profession and the lay public, as well as a deeper commitment of S.A.S. members to the principles of autonomous student government.

This year the first tentative steps towards achieving some of these goals have been taken. The first National Architectural Students' Conference was held with the objective of eventually forming a national student association. A monthly newsletter was organized to inform the students and the different schools across Canada of new developments and ideas. In addition, for the first time students within our own faculty have begun to communicate on a large scale regardless of inter-class barriers, by means of "bull-sessions" and "informal seminars". The value of this group interaction in reducing inhibitions and encouraging the discussion of a wide range of ideas and in engendering an atmosphere of free and healthy creative endeavour cannot be overestimated . . . but this is just a beginning. It is the hope of this year's council that this spirit will continue to flourish and eventually encompass the broadest spectrum of student activity.

E. George Kneider,
Senior Stick.

FACULTY MEMBERS 1966-67

ARCHITECTURE

Adaskin, Gordon, Dip.Art (Vancouver), Asst. Professor

Brunon, Joseph, B.Arch. (Tor.); M.Arch. (M.I.T.), A.R.I.B.A., M.R.A.I.C., Asst. Professor

Collin, Jacques, Architecte D.P.L.G. (France), Urbaniste E.I.U.P. (France), Assoc. Professor

*da Roza, Gustavo U., Jr., B.Arch. (Hong Kong); M.R.A.I.C., Assoc. Professor

de Forest, Claude, B.Arch. (Man.); M.Arch. (M.I.T.), M.R.A.I.C., Assoc. Professor

Dobereiner, David, A.A. Dip. (London); A.R.I.B.A., Assoc. Professor

Ellis, Don A., B.S.(Arch.) (U. of Cincinnati); M.Arch. (M.I.T.), Assoc. Professor

Erginsav, Ozdemir, B.Arch., M.Arch. (Harvard), Asst. Professor

Forster, Peter, A.A. Dip. (London); A.R.I.B.A., Assoc. Professor

Gillmor, R. Douglas, B.Arch. (Man.); M.Arch. (M.I.T.), (M.R.A.I.C.), Assoc. Professor

Gorrie, Colin, B.Arch. (Man.), Lecturer

**Graham, John W., B.Arch. (Man.); M.I.D.I.M., M.R.A.I.C., Professor

**Janowski, Tadeus M., M.F.A. and Arch. (Poland); M.Arch. (U. of Illinois); S.A.R.P., Z.P.A.P., Assoc. Professor

Jesson, Denis M., B.Arch. (M.I.T.), Asst. Professor

Koerte, Arnold, Dip. Ing. (Munich); M.Arch. (Harvard), Asst. Professor

Lehrman, Jonas B., A.A. Dip., Dip. T.P. (University College); M.Arch. (McGill); A.R.I.B.A., A.M.T.P.I.C., M.R.A.I.C., Assoc. Professor

Lewis, James Palmer, B.Arch. (Man.); M.R.A.I.C., Asst. Professor

Lye, Eric, B.Arch. (Miami), M.F.A. (Arch.), Princeton, Asst. Professor

Nelson, Carl R. Jr., B.Arch. (Minn.); M.Arch. (M.I.T.), M.R.A.I.C., Assoc. Professor

* on leave second term

** on leave for session

Russell, John A., B.Sc.(Arch.) (M.I.T.); M.Arch. (M.I.T.); Dip. d'Arch.(Fontainebleau); F.R.A.I.C., F.R.S.A., M.A.I.A., F.I.A.L., A.R.C.A., Dean & Professor

Sellors, Roy, B.Arch. (Man.); M.Arch. (M.I.T.); M.A.I.A., F.R.A.I.C., Professor

Sengupta, Asit N., B.Arch (Calcutta), M.Arch. (M.I.T.), M. Urban Design (Harvard), M.R.A.I.C., Asst. Professor

Styliaras, Dimitrios, Dip.Arch-Eng. (Berlin); Ph.D., C.P. (Berlin); M.R.A.I.C., Assoc. Professor

Tivoli, Octavio, Arch. (Tucuman, Argentina), Asst. Professor

Welch, John D., A.A. Dip. (London); A.R.I.B.A., Assoc. Professor

Wilkinson, Denis R., Dip.Arch., Dip. Lands.Arch. (Dunelm), Asst. Professor

CITY PLANNING

Kostka, V. Joseph, Ing.Arch. (Prague); M.R.A.I.C., A.M.T.P.I. (London); A.I.P.; A.G.S., Head & Professor

Page, John E., S. J., B.A. (Loyola); B.Sc.(C.E.) (Man.); B.Th.(Tor.); M.C.P. (Man.); PhD. (Penn.); M.E.I.C., T.P.I.C., A.I.P., Assoc. Professor

Will, Edward J. S., B.A. (Man.); Dip. (C.P.) Man.), M.C.P. (Man.), Asst. Professor

INTERIOR DESIGN

Brooks, Jill (Mrs. W. H.), B.I.D. (Man.), Lecturer

Chrabaszcz, Joseph, B.F.A. (Syracuse), Assoc. Professor

Chrabaszcz, Raquelle (Mrs. J.), B.I.D. (Man.); M.I.D.I.M., Asst. Professor

Dunklee, Donald L., B.Arch. (N.Y.); Dip.I.D. (Fontainebleau), Assoc. Professor

Harland, Joan M., B. Arch. (Man.); M.A. (Columbia); A.T.C.M. (Toronto); M.I.D.I.M., Head & Professor

Marshall, C. Grant, B.I.D. (Man.); M.I.D.I.M., Assoc. Professor

Veitch, Ronald M., B.I.D. (Man.); M.I.D.I.M., Asst. Professor

Morse, Joan (Mrs. L.), B.I.D. (Man.), Sessional Lecturer

JOHN A. RUSSELL DEDICATION

John Russell came to Winnipeg and the University of Manitoba as an honour graduate from the Massachusetts Institute of Technology. The year was 1928 and he had not yet celebrated his twenty-first birthday! He came as an assistant to Arthur Stoughton who had founded the Department of Architecture in 1913 and together they constituted the entire staff of the School. He returned briefly to M.I.T. to receive his Master's degree in 1932 which was followed by a summer at the Fontainbleau School of Fine Arts as a result of winning the Fontainbleau prize while doing Master's work.

Professor Russell succeeded Milton Osborne as Head of the Department of Architecture in 1946 which post he maintained until appointed Dean when the School was raised to the status of a Faculty at the time of its 50th Anniversary in 1963.

Since 1932, Professor Russell spent his Architectural life here at the University in teaching and developing, in the broadest sense, a fine Architectural School which we hope will remain one of his greatest monuments in the years to come. The School, and its reputation, must be built on the quality and character of its students and graduates and these are the heritage he has left. John Russell was intensely proud of his students through the years and while he would not have accepted credit for their considerable successes, he was in so many instances entirely responsible for them. The wonderful demonstration of esteem by the students at the funeral services was an indication that his deep concern for the welfare of all his students is felt as strongly today as it always has been.

While we at the University are aware of his great contribution, he has, through the years, been responsible for so much, both in the local community and in national affairs.

The University Glee Club and Dramatic Society reached a high point in their success during the 1930's and 1940's when Professor Russell produced stage settings of a caliber not seen before in Winnipeg. The stage work in those years became a school project and many of the students worked long and hard under John's inspired leadership.

The Winnipeg Ballet and the Winnipeg Little Theatre (to later develop into the Manitoba Theatre Centre) were also, in their early days kept alive so much by John Russell's enthusiasm and dedication and his ability to produce the fine backgrounds of their performances. The Royal Winnipeg Ballet of today owes him a debt of gratitude for no small part of its success.

His interest and activities in the Arts in Winnipeg kept him closely concerned with the Winnipeg Art Gallery of which he had been president and a long-time friend and advisor.

Dean Russell's talents and personality extended far beyond local confines and were recognized in, among many other activities, his appointment as an original member of the Canada Council when it was formed, and in his many services as Professional Advisor for Architectural Competitions and on Advisory Committees concerned with Architectural design.

John Russell combined so many of the finest attributes that his loss is not just that of a Dean of a School of Architecture, or a leader in community life but that of a close friend to so many of us. We are seldom fortunate enough to know as fine a man in a lifetime.

Professor Roy Sellors

M.A.A. SCHOLARSHIPS
1964 - 1965
WALLACE WIGHT
DAVID MESBUR
1965 - 1966
DAVID HAMILTON
WALLACE WIGHT

M.A.A. Book Prizes — May, 1966

Second Year:	R. Hoffart
	R. Jefferson
	P. Lau
Third Year	M. Craven
	D. Hamilton
	B. Rasch
	L. Tom
	P. Wreglesworth
Fourth Year	G. Bell
	G. Kneider
	F. Prevost
	K. Rankin
	W. Wight
Fifth Year:	A. Burka
	L. Chesloc
	C. Cunningham
	W. Hurst
	A. Muscovitch
	A. Olive

M.A.A. Book Prizes — May, 1965

Second Year:	D. Cameron
	J. Cantafio
	D. Hamilton
	A. Katz
	I. Kotowycz
	K. Sotiroff
	P. Wreglesworth
Third Year	R. Kirby
	F. Prevost
	G. Bell
	N. Ripley
	W. Wight
	T. Brown
	G. Kneider
	E. Ezinga
Fourth Year:	R. Carson
	A. Burka
	A. Cheng
	B. Levinson
	A. Muscovitch
	H. Nolan
	T. Puhm
	H. Schumann
Fifth Year:	C. Gorrie
	D. Kerr

PERSPECTIVE PATRONS 1965-66

John A. Chivers, Architect
Winnipeg, Man.

A. T. Galt Durnford
Montreal, Que.

Duncan Ramsay, Partridge
Winnipeg, Man.

C. A. Fowler & Company
Halifax, N.S.

Green, Blankstein, Russell Associates
Winnipeg, Man.

Howard and Robert Bourns
Edmonton, Alta.

Izumi Arnott and Sugiyama
Regina, Sask.

Libling Michener & Associates
Winnipeg, Man.

McCarter, Nairne & Partners
Vancouver, B.C.

Moody, Moore, Whenham & Partners
Winnipeg, Man.

Number Ten Architectural Group
Winnipeg, Man.

Page & Steele
Toronto, Ont.

John B. Parkin, Associates
Toronto, Ont.

Pratt Lindgren & Associates
Winnipeg, Man.

Rule, Wynn & Rose Associates
Edmonton, Alta.

Shore & Moffat and Partners
Toronto, Ont.

J. Stevenson & Associates
Calgary, Alta.

Smith, Carter, Searle & Associates
Winnipeg, Man.

Ward & MacDonald Associates
Winnipeg, Man.

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